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ABSTRACT

This study attempted to treat the information gap in baseline data by projecting the total enrollments of six of the original "Adams" states (Georgia, Florida, Maryland, North Carolina, Virginia, and Pennsylvania) and four "non-Adams" states (Tennessee, Texas, South Carolina, and Alabama). The report is divided into six sections. Chapter One, the introduction, establishes the context, objectives, methods employed, significance and limitations of the study. Chapter Two, "Historical Perspectives: Desegregation and Equal Opportunities for Blacks," provides background information regarding desegregation related to blacks generally and the "Adams" litigations particularly. This chapter also contains a summary of the status of desegregation in the "Adams" states. Chapters Three and Four provide a review of literature relating to demographic factors that influence higher education enrollments and determinants of such enrollments. Chapter Five analyzes the findings of two selected states (Georgia and Virginia). Chapter Six outlines conclusions and recommendations for future research. A detailed statement of concepts and methods used in the study is appended. (Author/MK)

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PROJECTION OF THE HIGHER EDUCATION ENROLLMENTS OF TEN SELECTED STATES BY RACE, WITH EMPHASIS ON SIX OF THE ORIGINAL ADAMS STATES

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Part 1 of the Research Program on Problems Relating to the Desegregation of Higher Education

A Report to the
National Institute of Education

INSTITUTE FOR SERVICES TO EDUCATION
Division of Research and Evaluation

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HIGHLIGHTS

GENERAL

- The enrollment projections produced through this study represent a first step in the development of sound planning tools for policymakers in the ten selected states: Alabama, Georgia, Florida, Maryland, North Carolina, South Carolina, Pennsylvania, Tennessee, Texas and Virginia. They pose norms by sex, attendance, type of institution and race that the selected states can use in establishing enrollment targets within the context of the cost, socio-political and educational constraints of their state. Hence, the projections facilitate the intorduction of further objectivity and rational thinking into the desegregation planning processes of the six Adams states and the two states wrestling with the desegregation of higher education outside of the Adams mandate (Pennsylvania and Maryland).

- Population data derived from both federal and state agency sources often lack comparability because of variations in the populations covered, the definitions employed, the methodologies used, the years addressed and the accuracy and completeness of the reporting.

- The collection of educational data was even more problematic, since it appeared that the education agencies of the selected states focused more on grades k through 12 than postsecondary education statistics.

- The inconsistency and incomparability of the racial statistics available at the federal level further underscored the limitations of the Office for Civil Rights (OCR), Department of Health, Education and Welfare, in detecting discriminatory patterns in access practiced by colleges and universities in receipt of federal dollars.

SPECIFIC

The analyses of the population and enrollment data for the states of Georgia and Virginia bore out three critical concerns which stimulated the conduct of this study:

- The enrollment-related desegregation policies of the two states as defined in their statewide plan militated against the equitable delivery of services to both blacks and whites.

- The enrollment targets related to blacks specifically were based on narrow conceptualizations of the factors which determine student enrollment in general and black enrollment in particular.

- The unavailability of reliable longitudinal racial statistics at the state

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PROJECTION OF THE HIGHER EDUCATION ENROLLMENTS OF TEN SELECTED STATES BY RACE, WITH EMPHASIS ON SIX OF THE ORIGINAL Adams STATES

CHAPTER 1

Introduction

Twenty-four years after the Brown[1] decision, equality of educational opportunity has yet to be achieved for blacks. This is especially true in the public higher education sector of states with a history of de jure segregation, where dual systems of learning - one for blacks and one for whites - are still in existence.[2]

The Adams litigation - the most critical series of court cases launched in the area of desegregation since the Brown case - has challenged the legality of dual systems of public higher education for nearly a decade. The initial Adams mandate (Adams v. Richardson, 1970) challenged the Department of Health, Education and Welfare (HEW) to enforce the Civil Rights Act of 1964 in ten states* which were operating dual systems of public higher education - either by obtaining acceptable statewide plans from the states or by cutting off federal funds. This initial class action suit, which was filed by the Legal Defense Fund (LDF), triggered a series of litigations that resulted in the acceptance of statewide plans. These plans were subsequently declared invalid because of the inclusion of planning principles which forecasted the dismantling of the historically black colleges as well as inequitable educational opportunities for blacks generally.

In the most recent Adams mandate (Adams v. Califano), HEW was ordered to specify new guidelines for the development of statewide desegregation

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*Arkansas, Florida, Georgia, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, Pennsylvania and Virginia.

plans for the affected states. These guidelines, which were released on July 5, 1977 and amended in August, 1977, included three broad principles posed by the National Association for Equal Opportunity in Higher Education (NAFEO) as essential to an equitable desegregation process: (a) utilization of statewide approaches to the eradication of dual systems of public higher education; (b) sensitivity to the unique status of the historically black colleges and the role that these institutions have played in facilitating black access to higher education; and (c) establishment of specific goals and timetables.[3] Within the framework of these and other broad educational and legal principles, the guidelines set forth a slate of criteria for correcting inequities in the higher educational practices of the Adams states, including the desegregation of (1) student enrollments, (2) academic and non-academic personnel, and (3) governing boards at all levels of the higher education hierarchy.

The new guidelines call for complex educational planning decisions supportive of the long-term interests of both blacks and whites. For example, what mix of intervention programs - from pre-college to the state education agencies - is required to ensure the dissolution of disparities in high school completion rates, access to and distribution in undergraduate, graduate and professional programs, college-going rates, retention, and equitable output? What represents a reasonable time-frame for the educational policy formulation processes of these states to guard against the perpetration of higher education inequities? What should be the role of the black colleges and the predominantly white institutions in accomplishing desegregation in each state?

Clearly, the answers to these questions and subsequent responsive decision-making require a broad array of baseline information which accurately define the issues and portray trends in the condition of

education in each of the Adams states by race, particularly with respect to students. Although the statewide plans (which were approved or provisionally accepted by HEW) tend to base goals for desegregating enrollment on existing data in this area, these data are fragmented and are often applied in a methodologically questionable manner. For example, the state of Virginia has committed itself to a 150 percent increase in the current enrollment of blacks matriculated in traditionally white institutions.[4] This goal was derived from (1) the observation of a 25 percent disparity in the rates at which black and white high school seniors enter these institutions and (2) conclusions that the enrollment of approximately 3,203 additional first-time freshman black students at four-year traditionally white institutions by 1982-1983 would constitute parity.

This goal assumes that the size of the pool of black high school seniors will remain constant through 1982-1983 despite the projected 3.3 percent increase in the 18-to-24 age-cohort in Virginia between 1974 and 1985.[5] Further, no thought is given to equality of output and the implications of this factor for access goals. Another factor worth noting is that the enrollment data in the Virginia plan tend to be ambiguous; enrollment, in most instances, is expressed according to total head-count. No distinctions are provided regarding degree-credit versus non-degree status, full-time versus part-time enrollment and full-time versus full-time equivalent enrollment.

A second example can be drawn from the statewide plan of Georgia. Although the Georgia plan demonstrates a sensitivity to the factors which impact enrollment size (e.g., the size of college-age population, birth rates, high school graduates and college attendance), the historical and projection data provided are not broken out by race.[6] Hence, the data are

too general to actually facilitate planning for the desegregation of enrollments in the state. Moreover, the projections for graduate and professional education,[7] which were broken out by race, are based on spurious definitions of parity. For example, the projection of black enrollments for nine of the graduate and professional disciplines are kept constant from 1976 through 1982 because the current enrollments of blacks in the nine areas are proportionate to the number of blacks receiving bachelor's degrees. Eight out of nine of the nine disciplines, however, represent fields in which blacks have been historically underrepresented (e.g., biological sciences, health professions, physical science and environmental design).

Objectives of Study

This study attempted to treat the information gap in baseline data by projecting the total enrollments of six of the 10 original Adams states (i.e., Virginia, Maryland, North Carolina, Georgia, Florida and Pennsylvania) and four non-Adams states (Alabama, South Carolina, Texas and Tennessee) by race and other related variables. Initially, the expected outcomes of the study included the production of three sets of enrollment projections for each state by race, sex, attendance status, type of institution and control according to predominantly white and predominantly black institutions. Further, each set of projections was to be based on tested assumptions regarding a series of causal factors including (1) demographic trends, (2) college-going rates, (3) attrition rates, (4) student financial aid and the poor pre-college experiences of black students. Because of the limitation of the data and cost constraints, the final study addressed the following objectives from an exploratory perspective:

- Identification of those factors which contribute to the flow of blacks and whites thorugh the total educational system.
- Description of trends in the national population and the total population and selected age-cohorts of each state in ten-year increments, 1950 through 1970 and five-year increments, 1975 through the year 2000.

- Description of student flow patterns related to college-going rates, attrition rates, and attainment in each of the states by race and other factors.

- Selection of an existing formula for projecting enrollments by race according to sex, attendance status, control and type of institution.

- Projection of the total enrollments of the 10 states by race, sex, attendance status, control and type of institution.

- Analysis of the population trends and the enrollment projections of two selected states within the framework of output trends (high school and college completion rates); and

- Comparison of the resulting projections with the projections included in the desegregation plans of the selected states.

The findings of this study are limited to an analysis of the population and enrollment projections of two states: Georgia and Virginia. These projections address enrollments by race only. No attempt is made to examine the projections by sex, type of control and type of institution.

CONCEPTS AND METHODS

A number of concepts and methods were used to determine the factors which influence the flow of students through the educational system and to project ultimately the enrollments of the 10 states.

The choice of the 10 states included in this study was primarily dictated by two factors: (1) the Adams litigations; and (2) the constraints of the ISE data base on black colleges served by ther Thirteen College Curriculum Program (TCCP), a developmental education effort launched by the Institute in 1967. Six of these states were among the 10 states cited in the Adams vs. Richardson case as in violation of the Civil Rights Act of 1964: Florida, Georgia, Maryland, North Carolina, Pennsylvania and Virginia. The remaining four states--Alabama, Texas, Tennsesee and South Carolina--are states which not only contained a number of black colleges served by the TCCP, but also a significant number of black colleges in general. These 10 states were believed to be sufficient for the purposes of this study to demonstrate the range and variability in the statistical status and trends

in the subpopulations under consideration.

Conceptual Framework

Through the use of a comprehensive range of secondary sources, including the works of Astin,[8] Arce,[9] Blake,[10] the Carnegie Council for the Advancement of Teaching,[11] Cartter,[12] Dresch,[13] Froomkin,[14] and Freeman,[15] a flow model of educational progression was developed to serve as the conceptual framework for the study. The flow model was developed to (1) classify the population by geographical regions, time periods, age-cohort, and selected demographic characteristics, including race and (2) facilitate the tracing of the population from birth through the primary and secondary levels, undergraduate, graduate and professional levels as well as the many pathways in this progression. This model provided the framework for decisions related to data collection requirements, data classification and the measurement units to be used for such classification as well as the formulation of relationships among the classes of data in terms of their use as criterion, predictor and indicator variables in predicting equal educational opportunity.

Among the factors addressed in this model are: birth, pre-school, primary school, high school, high school drop-outs, high-school graduates, college entry, non-entry into college, student importation and exportation, enrollment in predominantly white versus predominantly black institutions by control and type of institution, college transfers, drop-outs and graduates, through enrollment in and graduation from graduate and professional schools. The model also makes an allowance for causal factors (e.g., income level of family, college-going rates of parents, cost of education, the availability of student financial assistance, and the post-World War II baby boom), although such factors are not specifically treated in the model

at its present stage of development. Factors of special significance to black access to post-secondary education included (1) the aspirations of high school seniors, (2) high school graduation rates, (3) college-going rates, (4) pre-college experiences and (5) student financial aid.[16,17,18,19,20,21]

Data and Data Collection Procedures

Whenever possible, the data utilized in this study were obtained from existing data bases. The historical population data (1950, 1960 and 1970) and the state population projections were obtained from the United States Bureau of the Census. A broad array of periodicals generated by the Bureau of the Census were also used to determine actual enrollment and attainment patterns at the state and national levels. Enrollment data by race for the years 1968, 1970, 1972, 1974 and 1976 were obtained from the Office for Civil Rights. The American Council of Education's series on enrollment also proved to be very helpful. Population, enrollment and attainment data were also obtained from state education agencies when possible.

The major constraints which guided the development of the student flow model and related data bases need to be made explicit at this point. Both quantitative and qualitative bases for examining equal opportunity and assessment were addressed in this study. While the statistical bases provide a necessary foundation, they do not provide a sufficient foundation for, in fact, the development of parity formulas. Economic, legal, educational, social and other factors and intervention strategies must also be considered in policymaking, planning and program implementation directed toward the achievement of parity. While this study provided descriptive data of past and present status and trends in population, enrollment and attainment, it focused on the development of projections which could provide the

necessary quantitative support for policymaking and planning related to state-controlled institutions of higher education in the Adams states. Consequently, the models and their data bases sought to test the extent to which data could, in fact, be collected to fill the requirements of the model. No attempt was made to collect data directly from the subpopulations under consideration. This led to a different type of testing of the data: the extent to which the data from various sources are expressed in comparable units or the extent to which they could be transformed into comparable units.

Because of cost constraints, it was decided early on in the study to select an existing enrollment projection methodology and to apply national enrollment rates to state demographic data, thereby producing ideal enrollments based on national standards. A decision was made also for purposes of cost savings, to use the 15-to-24 rather than the 18-to-24 age-cohort--the traditional college-age group--since the former age group was among the 10 summary age categories used by the Bureau of the Census for projecting state demographic data for the years 1975 through 1980.

The selection of a projection model was preceded by a thorough review of the literature which has unfolded on enrollment projections during the past 20 years. Among the major models reviewed were the Carnegie Commission on Higher Education's baseline-projection method (1970) in which "college enrollments by age are calculated for each year by multiplying the appropriate enrollment rate by the projected civilian population for that year;" Cartter's fixed coefficient recursive models which take into account long-term trends in the relationship between high school graduation, college entrance, and degree completion; Dresch's demographic-economic model, which forecasts educational attainment, but also yields some crude estimates of student enrollments; Freeman's three-equation recursive model which

investigates (a) the relationship between economic incentives and college enrollments, (b) the number of bachelor's graduated in a given year and freshmam enrollments 4 to 5 years earlier, and (3) the starting salaries of college graduates and alternative salaries in the economy; and Henderson's time-series approach to projecting participation of 18-year-olds as college freshmen from 1975 to 1985, which took into account (a) regional shifts in the 18-year-old population, (b) the expected enrollment of 18-year-olds at institutions within their home states, and (c) the historical migration patterns between states. A careful review was also made of the projection methodology used by the Southern Regional Education Board, which used a combination time-series/ratio approach to project enrollments for 14 southern states including 9 of the 10 states considered in this study. Although these methods differ widely in terms of assumptions, most tend to forecast a slower rate of growth in higher education enrollments through 1995 and an upswing in enrollment near the year 2000. The Carnegie baseline projections project a total 12.1 percent in 1985; and 12.7 percent in the year 2000; the National Center for Educational Statistics, 11.2 (low alternative) in 1985.

Ultimately, the low alternative age-specific enrollment projection method of the National Center for Educational Statistics, a combination time-series and ratio approach, was selected for projecting the enrollments for the following reasons:

- The age-specific method is sensitive to changes in the age-distribution of students, and include age specific rates which treat sex, attendance status and type of institution.
- Census data were used to compute enrollment rates for the years 1967 to 1976. The enrollment rates were projected through 1986.

- The assumptions underlying the model were acceptable. The low alternative series assumes that "enrollment rates remain constant at the average of their 1975 and 1976 levels. Hence, enrollments will only increase slightly through 1981 (11.6 million) and then decrease back to 11.0 million in 1986. At this level, the number of full-time equivalent students in 1986 will be 6.1 million--almost 600,000 fewer than in 1976. Full-time equivalent enrollment will increase slightly to 8.5 million in 1980 and then decrease gradually, reaching 7.9 million in 1986, 376,000 fewer FTE students than in 1976. According to the high alternative series, enrollment is forecasted to be as high as 14.8 million in 1986, while the intermediate alternative series forecast an enrollment of 12.9 million students.

- Most importantly, the use of the projection model was feasible cost-wise.

The resulting projections are to be viewed with caution, however, because of the volatile* nature of higher education in general and because of inherent limitations due to the use of census data, the use of the 15-to-24 age-cohort rather than the 18-to-24 age-cohort, and the use of a projection model which has not stood the test of time. Also, it is important to keep in mind that the enrollments analyses of the selected states include both public and private institutions, although the larger percentage of the enrollments of the two states are located in public institutions. Further, total enrollment includes both full-time and part-time students.

The significance of this study is clear. Although Judge Pratt's court order of April 1, 1977 set a historical precedent in terms of recognition of the uniqueness of the historically black colleges, the interpretation of the guidelines as expressed in the desegregation goals proposed in the state-wide plans threatens the the implementation of equitable desegregation policies in the Adams states. Substantial clarification is

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* Volatility refers here to the variability in higher education enrollments due to the lack of mandatory attendance. Hence, a broad array of factors influence such enrollments including: state and federal policies, economic conditions, the return of education and the changing cultural values of recent college-age and non-traditional cohorts of students.

needed regarding past and present trends in the participation of blacks in public higher education as compared to high school completion and college completion rates of blacks. Projections of enrollments by race are direly needed.

Further, decisions which threaten black access to high education are being made daily by a number of mainline institutions. For example, three professional schools, in response to the Bakke decision, recently abolished their special admissions committee: the University of Pennsylvania Law School, the Stanford University Medical School and the Wayne State University Law School.[22] Ironically enough, these decisions are being made at a time that black enrollment in the nation's medical and law schools is declining.[23]

Moreover, the historically black colleges--which after more than 100 years, including the expansionary era of the sixties and early seventies, still provide more than 40 percent of the black graduates of the nation--are facing possible dissolution as a result of the Adams mandate.

Norfolk State College (Tidewater, Virginia) is challenging the Office of Civil Rights' mandate to eliminate its business administration and account programs because of similar programs offered by Old Dominion University--a predominantly white institution in close proximity to the college. Albany State (Georgia), with support of students and alumni, challenged and successfully offset a proposed merger with Albany Junior College. Tennessee State University is involved a court case involving the federal order that this university merge with the University of Tennessee at Nashville by July 1, 1980.

Such conflicting circumstances further document the need for the conduct of studies which (1) clarify student enrollment issues (2) generate projection data that facilitate statewide planning for the desegregation of higher education enrollments, and (3) examine such data within the framework of analytical models supportive of equity for blacks.

Of particular interest to educational policymakers in the Adams states is that part of the criteria requiring states to improve and increase the retention and completion rates for blacks and other minorities participating in a state's postsecondary educational system. These policymakers are now faced with dealing with several crucial questions that they did not have to deal with prior to Adams.

Organization of Report

This report is divided into six parts and several appendices. Chapter 1, the introduction, establishes the context, objectives, methods employed, significance and limitations of the study. Chapter 2, "Historical Perspective: Desegregation and Equal Opportunity for Blacks," provides background information regarding desegregation as related to blacks generally and the Adams litigations particularly. This chapter also includes a summary of the status of desegregation in the current Adams states. Chapters 3 and 4 provide an intensive review of existing literature relating to demographic factors which influence higher education enrollments, with special emphasis on those factors which impact black enrollment, as well as the determinants of such enrollments. Chapter 5 analyzes the findings of two selected states and Chapter 6 outlines the conclusions and recommendations for future studies. The tabulated enrollment and population data are provided under separate cover. Appendix A presents a detailed statement of concepts and methods used in the study.

FOOTNOTES

1. The Brown vs. The Board of Education Case, Topeka, Kansas, resulted in the reversal of the Plessy doctrine. The "separate but equal" doctrine was outlawed in public school education.

2. The segregation of higher education was legally enforced in more than a third of the states at one time.

3. Kenneth Adams, et al. vs. Joseph A Califano, Jr., "Amended Criteria Specifying Ingredients of Acceptable Plans to Desegregate State Systems of Public Higher Education," Federal Register, Vol. 47, No. 155, Thursday, August 11, 1977.

4. The Virginia Plan for Equal Opportunity in State-Supported Institutions of Higher Education (Revised 1978), p. 57.

5. Southern Regional Education Board, A Profile of Enrollment in Higher Education in the South, 1985, 1977.

6. A Plan for the Further Desegregation of the University System of Georgia, September 1, 1977.

7. Ibid.

8. Alexander H. Astin, Preventing Students from Dropping Out. Washington, D. C.: Jossey-Bass Publishers, 1975.

9. Carlos Arce. Institutional and Contextual Determinants of Black Enrollments in Predominantly White Colleges and Universities 1946 to 1974. A doctoral dissertation, 1976.

10. Elias Blake, "Federal Policy and the Goals of Equal Opportunity Beyond Desegregation; Urgent Issues in the Education of Minorities. (New York: College Entrance Examination Board), 1977, p. 31.

11. Carnegie Council for the Advancement of Teaching, More Than Survival, Prospects for Higher Education in a Period of Uncertainty, Washington, D. C.: Jossey-Bass Publishers, 1975.

12. Alan Carter. Ph.D's and the Academic Labor Market (New York: McGraw-Hill Book Company, 1976).

13. Stephen P. Dresh, "Educational Saturation: A Demographic Economic Model," AAUP Bulletin, 61, Autumn 1975, 234-47.

14. Joseph Fromkin, Needed: A New Federal Policy in Higher Education (Washington, D. C.: Institute for Educational Leadership).

15. Richard Freeman, The Over-Educated American (Academic Press), 1976.

16. Alexander W. Astin, Preventing Students From Dropping Out. (Washington, D. C.: Jossey-Bass Publishers, 1975).

17. Alexander W. Astin and R. J. Panos, The Educational and Vocational Development of College Students Washington, D. C.: American Council on Education, 1969.

18. Elias Blake, Jr., "Federal Policy and the Goal of Equal Opportunity," Beyond Desegregation, pp. 28-33.

19. Elias Blake, et al. Degrees Granted and Enrollment Trends in Historically Black Colleges: An Eight Year Study, Washington, D. C.: Institute for Services to Education, 1974.

20. Fromkin, Ibid.

21. David W. Brennan and Chester E. Finn, Jr., editors. Public Policy and Private Higher Education. Washington, D. C.: The Brookings Institution, 1978.

22. More Than Survival. Prospects for Higher Education in a Period of Uncertainty, The Carnegie Foundation for the Advancement of Teaching, Washington, D. C.: Jossey-Bass Publishers, 1975.

23. Alice Bonner, "Bakke Aftermath: Schools Taking a Second Look at Affirmative Action," The Washington Post, December 7, 1978, pp. A1 and A8.

CHAPTER 2

Historical Perspectives: Desegregation And Equal Educational Opportunity for Blacks

Prior to Adams

Desegregation as a means of achieving equal educational opportunities has received considerable attention in the related literature since 1954. The recent development of the desegregation goal as a substantive issue affecting blacks and black colleges owes its evolution to a long series of court cases that began in the late nineteenth century.[1] The first case that treated the issue of segregation in public higher education, though somewhat tangentially, was Plessy v. Ferguson, 163 U.S. 537 (1896). In Plessy, the United States Supreme Court ruled that racially separate but equal public facilities were not in violation of the Constitution. The impact of this decision, coupled with the 1890 Morrill Act's reference that it was proper for states to establish separate land-grant colleges for blacks, helped legitimize de facto segregated public educational institutions in America. In 1908, The Supreme Court subsequently sustained a Kentucky statute forbidding colleges from offering education to blacks and whites simultaneously in the same institution.[2] This ruling reaffirmed the Plessy doctrine as applied to higher education, and encouraged states to neglect public black colleges in favor of white state institutions, thereby ensuring their separate and unequal status.

The National Association for the Advancement of Colored People (NAACP),

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*This section is drawn from Chapters 1, 2, and 4 of A Critical Examination of the Adams Case: A Source Book, Institute for Services to Education, Washington, D.C., 1978.

founded in 1910, began to attack the separate but equal doctrine (also known as the "Jim Crow" doctrine) wherever it was found. The NAACP's primary area of attack was education. The NAACP noted that the public educational system of America supported the Jim Crow philosphy by encouraging legalized segregation. It was under the segregated system that this early black leadership, which moved to expose the inequities of segregated education, was sired and nourished. The NAACP, as Bullock notes, assumed early leadership in the black community's sustained fight for equal educational opportunities because it was one of the best organized civil rights groups. It was inevitable, as Bullock suggests, that the NAACP would lead the fight, begun in the 1930's, against segregation:

> "Its (NAACP) local branches, scattered as they were, had so handled the probing elements of the protest program that every Negro, sooner or later, would feel some blessing as a result of its effectiveness. Its success in the courts, where sheer equality was at first sought, was to inspire a new kind of confidence in American law and order, and many negroes would come to believe that the overthrow of segregation was a possibility. Most significant of all was the high level of intra-racial morale that the association was to induce: the growing tendency for individual Negroes to serve readily as plaintiffs in cases guided by the NAACP's attorneys and supported by its fund; the unmistakable martyrdom that was to await those who felt the retaliation of the white community because of the NAACP activities; and the halo of racial patriotism that was to crown all who were to be identified with the NAACP's litigations."[3]

The development of the NAACP's attack against segregated education began with an attack on the inequities sustained by the Jim Crow doctrine in graduate and professional schools in the 1930's. Chief architect of the NAACP's strategy was Charles A. Houston of Howard University's School of Law. Graduate and professional areas were the most vulnerable to attack because, as Bullock states, they represented "the point where no claim of 'separate but equal' could be reasonably made and where no promise of equalization could be realistically given."[4]

The NAACP reasoned that inequality could be proved in the higher education arena with ease for the following reasons:

1. Because of limited public graduate and professional schools available to Negroes in the South, it was thought that judges, by virtue of sheer academic affinity, would understand the shortcomings of separate and unequal educational systems with which the cases were concerned.
2. Because it would be financially impossible to furnish true equality in a dual system, desegregation would be the only practicable way to fulfill the constitutional obligation of equal protection.[5]

Once the rationale had been decided, the NAACP adopted the strategy of using mature black students as plaintiffs.[6] This strategy was expected to forestall any argument by proponents of segregation that the suits would lead to violence or the threat of social revolution.[7] The intent of this particular strategy was designed not to overwhelm but to persuade white America that the public educational system denied blacks access to educational opportunities.

Beginning in the border states, where resistance to black advances was thought to be less harsh than in the deep South, the NAACP began its legal attack upon racial segregation in education. The first major legal test came in 1935 and involved the denial of admission to a black, Donald Murray, by the University of Maryland's Law School.[8] With the NAACP's aid, Murray filed suit against the university, claiming that his constitutional rights as a citizen of Maryland had been violated, though he had sufficient educational

qualifications. Because Maryland provided no law school for blacks, the state court issued a writ of mandamus, ordering the University to admit Murray. The lower court's decision was affirmed by the Maryland Court of Appeals. The NAACP, thus helped legitimize its strategy of attacking segregation in states where resistance to black advances was less harsh than in the deep South.

As a result of the Murray case, a similar suit was filed by the NAACP on behalf of Lloyd Gaines in Missouri. Gaines had graduated in 1935 from Lincoln University, Missouri's state-supported land-grant college for blacks. After graduation he sought to pursue his education by attending law school. Because Missouri had no law school for blacks, Gaines applied to the University of Missouri Law school where he was denied admission and told that he might pursue his legal training at an out-of-state law school. The University also explained that if Gaines attended an out-of-state law school, the state would pay his tuition. Gaines rejected this offer and filed suit in the Missouri Circuit Court for a mandamus writ against S.W. Canada, registrar of the University of Missouri.[9]

The lower court held against Gaines, and the NAACP appealed the case to the United States Supreme Court. The Supreme Court decided that Gaines was entitled to equal protection of the laws and that the state was bound to furnish him, within its borders, facilities for legal education substantially equal to those that the state afforded for persons of the white race, whether or not other Negroes sought the same opportunity.[10] The Gaines case of 1938 established the principle that if states did not provide educational facilities for blacks equal to those provided for whites, then blacks were to be admitted to white institutions. This decision greatly

contributed to the growth of support by southern state governments for developing small graduate and professional schools within public black colleges. This support was based on the assumption that blacks would not seek admission to white, state-supported universities.

A second milestone in the NAACP's legal attack on segregation occurred in 1948 in Sipuel v. Board of Regents of the University of Oklahoma. As with Gaines and Murray, this case also involved the state's refusal to admit a qualified black to its law school. On appeal to the United States Supreme Court, the court held that denial of the applicant's admission violated the equal protection clause of the Fourteenth Amendment. The Supreme Court sent the case back to the Oklahoma Supreme Court which ordered the university to either admit Sipuel to the white law school or to suspend the white law school from operating until the state opened one for blacks.[11] Sipuel strengthened the established precedent that a court would order admission of blacks to white graduate and professional schools if no black ones existed.

In 1959, the United States Supreme Court ruled in the case of McLaurin v. Oklahoma State Regents. Although McLaurin, a black, was admitted to the graduate school of the University of Oklahoma, he was required to suffer the indignity of forced segregation as a student. McLaurin, for example, was required to eat apart from whites and even sit apart from them while in the classroom. The Supreme Court ruled that the required segregation imposed upon McLaurin was unconstitutional under the Fourteenth Amendment. It held that McLaurin was entitled to the same treatment inside the institution as any other student, regardless of race.

The attack against inequities perpetuated by evolution of "separate but equal" graduate and professional schools for blacks was in Sweatt v. Painter.[12] Marion Sweatt, a black postman, wanted to pursue his legal education by attending the University of Texas Law School in Austin. Sweatt's application

to the university was rejected on the basis of race, and the NAACP Legal Defense Fund (LDF)[13] brought suit on his behalf to gain his entry to the white law school.

The lower court, in 2946, had ordered the State of Texas to establish a law school at traditionally black Prairie View University, located forty miles from Houston. The legal education offered at Prairie View was not comparable to the education offered by the University of Texas, in any major respect. The state later abandoned its support for the Prairie View effort and established the Texas State University for Negroes in Austin. Texas State University put together a law school, and classes were to begin for Sweatt on March 10, 1947, if he chose to attend.[14]

Sweatt chose not to attend either Prairie View or Texas State and continued to pursue his case through the courts. When the case reached the Supreme Court, the court ruled that the black law school (Texas State) did not "measure up" to the established white law school (University of Texas). The court's reason was a critical landmark in desegregation litigation. The court concluded that Sweatt's exclusion from the University of Texas Law School violated his rights under the Fourteenth Amendment and prevented him from being educated with future leaders of Texas and American Society. The court ordered Sweatt's admission.

The Sweatt case marked the first time the Supreme Court had ordered the admission of a black to a school previously restricted to whites, on grounds that the black school established by the state failed to offer equal educational opportunity.[15] As John Fleming of Howard University's Institute for the study of Educational Policy (Washington, D.C.) notes, "It was clear from the decision that the court's arguments could be used by blacks to gain admissions to any graduate or professional school in the South."[16]

The NAACP Legal Defense Fund's concern with increasing access for blacks to higher education set the stage for the historical Brown decisions in 1954 and 1955 which focused on the public schools. In a well-developed strategy, based largely on its higher educaton experiences, the NAACP was able to get the United States Supreme Court to outlaw segregation in public education, completely reversing the Plessy doctrine. The Brown decision made one thing clear: race was no longer to be the organizing principle of educational institutions.

Although the Brown decisions provided a definitive legal determination regarding equalization of educational opportunities for all Americans, their actual implementation as national policy has not yet been realized. In addition, unfulfilled promises of the Fourteenth Amendment also have inhibited progress of black participation and attainment in education at every turn.

THE ADAMS CHRONOLOGY

The most important legal action to affect the educational hopes and aspirations of blacks and black colleges since 1954 involves decisions growing out of the Adams case. The case is important to the interests of blacks because it seeks to (1) identify an acceptable plan for implementing the desegregation of public higher education and (2) formulate policies to insure access and increase participation rates for black Americans at all levels of society.

Although the federal courts have managed to facilitate equitable solutions in implementing public school desegregation, the courts have experienced less success in fashioning equitable solutions for higher education. While some of the courts' difficulties in working with higher education desegregation can be attributed to the often recalcitrant behavior of Southern state governments, most of the problems result because of complexities inherent in determining higher education policies and practices. As an example, participation in higher education is not compulsory, as it is in public schools. Thus, dictates established in Brown, which subsequently led to development of racial percentages to desegregate public schools, would not be applicable to higher education.

The Adams case was filed by the NAACP Legal Defense Fund (LDF) because HEW was not enforcing Title VI of the 1964 Civil Rights Acts against those states operating dual systems of higher education. Title VI prohibits federal support to public educational institutions that practice segregation and discrimination.[17]

At the beginning of the case, LDF noted that HEW had failed to enforce Title VI in ten states (Arkansas, Florida, Georgia, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, Pennsylvania, and Virginia). The states cited were not the only ones known to be violating Title VI at the

time; however, they were ones in which federal officials (HEW) had completed field investigations and site visits detailing violations of Title VI.

The filing of the Adams case, as the Southern Education Foundation indicated, dispelled the notion that the nation's public colleges and universities were desegregated long ago.[18] Perhaps more important, this action revealed that predominantly white institutions in America had neither been responsive nor committed to providing sufficient access to black Americans wishing to enter higher education, or to benefit from a comprehensive array of higher opportunities.

The Adams Chronology Begins

The Adams case began shortly after January 1969. During this time, HEW concluded that several southern and border states were in violation of Title VI of the 1969 Civil Rights Act because they operated and maintained a dual system of higher education, one for blacks and one for whites.

After determining that certain states were in violation of Title VI, HEW sent letters to officials in Arkansas, Florida, Georgia, Lousiana, Maryland, Mississippi, North Carolina, Oklahoma, Pennsylvania, and Virginia asking them to submit plans in outline form for desegregating their higher education systems. HEW also requested that states submit final plans after receiving comments and criticisms from the department.

Because of HEW's inexperience in dealing with the desegregation issue as applied to higher education, the department moved cautiously in obtaining compliance from defaulting states. Statutory enforcement requirements of Title VI called for HEW to seek voluntary compliance first in the hope that states would respond to its request in good faith. In the initial letters transmitted to the ten states, HEW expressed hope that it would be necessary to commence administrative or judicial proceedings against defaulting states under Title VI.

In October of 1970, the NAACP Legal Defense Fund, through the Washington, D.C., law firm of Rauh, Silard and Licthman, filed a class action suit in the United States District Court for the District of Columbia, Judge John H. Pratt presiding. The suit was filed on behalf of two groups of plaintiffs. The first consisted of students attending public schools and colleges that had since the "enactment of the Civil Rights Act of 1964, segregated and discriminated on the basis of race in villation of the Fourteenth Amendment.. and yet had continued to receive federal financial assistance, contrary to Title VI of the 1964 Civil Rights Act." The second consisted of citizens and federal taxpayers whose taxes were being expended by the defendant, by grants to public schools and colleges that segregated and discriminated on the basis of race. Thus, both public schools and colleges were included in filings of the suit.

Named as defendants in the suit were Elliot T. Richardson, Secretary of HEW, and Stanley Pottinger, Director of the Office for Civil Rights (OCR). These men were cited because they exercised HEW's responsibility for enforcement of Title VI. Kenneth R. Adams, a student from Brandon, Mississippi, was first on the alphabetical list of plaintiffs listed in the suit. Hence, the legal title of the case was first known as Adams v. Richardson.

In making the complaint for its clients, LDF cited HEW's unsuccessful attempts to obtain acceptable desegregation plans from the ten states it had found in violation of Title VI.[19] The complaint alleged that:

> HEW had thus knowingly failed, and continues to fail to withhold federal funds from public colleges and universities which segregate and discriminate on the grounds of race. HEW has thus declined to exercise its juridsdiction under Title VI with respect to institutions of higher education...[20]

LDF asked the court for declaratory relief by compelling HEW to enforce Title VI by obtaining adequate desegregation plans from the states or by terminating federal funds to education systems of those states practicing

and maintaining racial discrimination and segregation. On the other side, HEW argued that the suit against it should be dismissed on the grounds that the department had the legal right to practice discretion in deciding whether action should be taken against defaulting states. HEW also pointed out that, if the need arose, it had discretion in determining the nature of the action to be taken against defaulting states.

In June of 1970, Judge Pratt denied HEW's motion for dismissal, and the case continued. LDF had amassed enough evidence to support the plaintiffs' contentions, so it filed a motion for summary judgement against HEW. Although HEW's motion for dismissal was denied, it, to, filed for summary judgement to avoid a trial.

After hearing arguments and reviewing evidence, Judge Pratt issued a memorandum opinion on November 16, 1972, responding to motions for summary judgement. The opinion noted that, because HEW had not properly fulfilled its obligations under Title VI, vestiges of segregation and discrimination existing in the Adams states had not been eliminated in higher education. The court's opinion was based upon the following findings of fact:

1. That five states, Louisiana, Mississippi, Oklahoma, North Carolina, and Florida ignored HEW's request for desegregation plans;

2. That five other states, Arkansas, Georgia, Maryland, Pennsylvania, and Virginia, had submitted plans that were unacceptable, and HEW had failed to formally comment on these submissions;

3. That HEW had not started enforcement actions against any of these states, nor had the matter been referred to the Justice Department for filing of suits against any states;

4. That HEW had attempted to justify its failure to enforce the law on grounds that (a) voluntary compliance was being sought; (b) complex problems accompanied desegregation of established state-wide systems; and (c) standards of desegregation established by the Supreme Court did not apply to public higher education;

5. That HEW had continued to send federal funds to defaulting states for benefit of their higher education systems.[21]

On February 16, 1973, after reviewing the entire record before the court, including the opinion of November, 1972, Judge Pratt ordered the plaintiff's motion for summary judgement and granted declaratory and injunctive relief for each separate cause of action in the complaint. This action amended the opinion issued in November, 1972. In granting the relief order for the section of the suit pertaining to higher education, the court ordered HEW either to obtain compliance from the ten states by receiving acceptable desegregation plans or to begin enforcing Title VI by terminating funds to those states that failed to develop and submit acceptable desegregation plans. The court also required HEW to submit to LDF progress reports on development and completion of state desegregation plans.

After the order was issued, HEW asked for a stay while it prepared an appeal. The stay was denied, and HEW wrote the ten states asking them to develop and submit statewide desegregation plans. During this period, HEW maintained in its appeal that it had properly exercised its discretion to enforce Title VI, and plaintiffs had no grounds to pursue the case.

Because of the implication of the Adams case for survival of public black colleges, the National Association for Equal Opportunity in Higher Education (NAFEO), an organization supportive of black colleges, filed an amicus brief with the appeals court. The NAFEO brief outlined its opposition to the contention made by LDF and HEW and requested that the suit be dismissed.

The Appeals Court Decision

On June 12, 1973, HEW's appeal was decided by the circuit court of appeals. The appeals court modified the injunction issued by Judge Pratt regarding higher education and affirmed the decision on the remainder of the order.

Although the appeals court agreed with the lower court's conclusion that HEW was derelict in carrying out its responsibilities under Title VI in the field of higher education, the court acknowledged that higher education did not readily lend itself to solutions used to desegregate public schools. In addition, the appeals court noted that higher education desegregation was an area in which HEW was inexperienced and that its caution not to move precipitously in this area was understandable. HEW's inexperience, however, did not excuse it from complying with the dictates of Title VI. Rather, the appeals court noted that HEW should be more deliberate in fulfilling its responsibilities.

The opinion of the appeals court indicated that it had been influenced by arguments presented in the NAFEO brief. For example, the court explained that unless desegregation was carried out on a statewide basis, the life and future of public black colleges would be jeopardized:

> "The problem of integrating higher education must be dealt with on a statewide rather than a school-by-school basis. Perhaps the most serious problem in this area is the lack of statewide planning to provide more and better trained minority group doctors, lawyers, engineers, and other professionals. A predicate for minority access to quality post-graduate programs is a viable, coordinated statewide higher education policy that takes into account the special problems of minority students and black colleges. As amicus points out, these black institutions currently fulfill a crucial need and will continue to play an important role in black higher education."[22]

In modifying the order affecting higher education, the appeals court decided that HEW should seek new desegregation plans from the Adams states. The court, however, made it clear that if HEW did not receive acceptable plans for desegregating state systems of higher education, it was to commence enforcement proceedings against defaulting states.

HEW and The Developing State Plans

HEW did not have a uniform set of guidelines for the states to follow in preparing their desegregation plans for higher education during early stages of the Adams litigation. Rather, HEW tried to deal with the planning process on a state-by-state basis. Although HEW adopted an individualized approach, the department, through its Office for Civil Rights, formulated a set of general requirements for states to follow in developing their desegregation plans. These requirements later were included in an OCR publication entitled, "Basic Components of State-Wide Higher Education Desegregation Plans".[23]

The objective of HEW's general requirements was to provide states with a guide that would overhaul their systems of postsecondary education so that a student's institutional choice could be based on merit rather than on racial criteria. HEW felt that unless this objective was the underlying principle of the planning process, a state could not promote a unified approach to desegregating its higher education system.

During the summer and early fall of 1973, HEW began analyzing the state desegregation plans it had received prior to June 1973. All of the states except Louisiana had filed a plan; therefore, HEW directed the Department of Justice to take legal action against Louisiana.

In brief, HEW's analysis of plans was designed to provide an assessment and evaluation as to whether plans were consistent with the department's objectives. If the plans were found deficient, then HEW would be able to help states bring plans up to par. HEW insisted that this procedure for analysis and follow-up would lead to development of acceptable plans as required by the appeals court decision.

HEW's review of plans during the summer of 1973, also involved meetings with black college representatives, LDF, and higher education officials from affected states. As a result of these meetings and the analyses, a more constructive set of guiding principles was fashioned for desegregation plans to follow. Summarized here, these principles were included in the initial evaluation and progress letters mailed by HEW to the states on November 10, 1973, and state:

1. that individual institutions cannot act alone to significantly effect desegregation; rather, desegregation requires an effective statewide approach;

2. that blacks must have input into the state planning process for desegregation;

3. that the concept of free choice should guide plan development;

4. that desegregation of a statewide system not place a disproportionate burden of implementation upon black students, faculties, or institutions;

5. that steps should be taken to upgrade predominantly black institutions so they can become viable, full partners in the states' higher education systems.[24]

Following the November, 1973, HEW communication, the Adams states were given an opportunity to revise their plans. By June 1, 1974, nine of the Adams states had revised and submitted their final desegregation plans to HEW. On June 21, HEW announced acceptance of eight of the nine plans. The plan submitted by Mississippi was not fully accepted. HEW accepted Mississippi's plan for desegregating its four-year institutions but did not accept the plan for its two-year colleges; Mississippi was subsequently referred to the Justice Department for legal action. (The tenth state, Louisiana did not submit any Plan. Like Mississippi, it, too, was referred to the Justice Department for legal action.)

During July and the early part of August 1975, HEW, through its Office for Civil Rights, sent another set of evaluation letters to the states, based on data collected from each of the eight systems of higher education during the preceding year. These letters detailed the manner in which the states were failing to abide by commitments made in their plans and called for states to make specific accomplishments. If states failed to respond affirmatively, HEW indicated that it would begin immediate enforcement. Georgia was excepted because its plan was found to be in substantial compliance.

The Plaintiffs Return To Court

In August 1975, LDF filed a motion for further relief in the court of Judge Pratt, because it felt HEW had not fulfilled the requirements of the appeals court decision. For instance, LDF's analysis noted that the eight desegregation plans accepted by HEW were not in keeping with directives of the court's decision. LDF's analysis also revealed that, despite HEW's attempt to carry out the court decision, the department had done very little to get states to accomplish commitments contained within their desegregation plans. Because of its evaluation, LDF asked the court for the following relief:

1. That no later than November 1, 1975, that HEW notify the eight states that its approval of their higher education desegregation plan is revoked;

2. That states promptly submit new plans complying with the district court and court of appeals decision;

3. That HEW issue uniform requirements for plan drafting, compiling statistical data, and other materials relevant to desegregation no later than November 15, 1975;

4. That HEW appriase new plans, if acceptable, by February 1, 1976.[25]

To insure that its request would be carried out, LDF recommended that the court urge HEW to use the following criteria in establishing requirements for the new plans:

1. That statewide plans must indicate that desegregation will result in a greater proportion of black students on white campuses;

2. That states must indicate that desegregation will increase the number of black faculty on white campuses;

3. That steps must be taken to increase the number of blacks on governing boards;

4. That states must indicate how desegregation will enhance the role of black colleges in a statewide system; and

5. That states must build into the planning process an on-going reporting and monitoring mechanism to evaluate steps taken by each state to implement its plans.[26]

Although an HEW official subsequently entered testimony in court during the hearings on the motion that HEW had accepted plans that were in fact unacceptable,[27] HEW opposed LDF's request for relief. HEW's initial opposition came because of the department's claim that procedures it followed in accepting and monitoring the eight plans were consistent with court decisions. Further, HEW added that LDF's motion was improper because allegations had not been made within a reasonable time and, thus, should have been barred by the court.

The district court did not respond immediately to LDF's motion, thereby directly circumventing time frames contained within LDF's request. The court did not schedule hearings on LDF's motion until January, 1977.

While the district court prepared to hold hearings on LDF's request for further relief, several major developments having a bearing on the case took place. In December 1975, for example, the Office for Civil Rights notified Maryland (HEW had accepted its desegregation plan) that HEW would begin enforcement proceedings against the state under Title VI. OCR's notification claimed that Maryland had failed to adequately implement its statewide desegregation plan for higher education.

After being notified of OCR's action, Maryland brought suit against HEW in United States District Court in Baltimore and obtained an injunction restraining HEW from initiating administrative proceedings. In issuing the injunction, the court stated that (1) HEW had not acted in good faith to obtain voluntary compliance and that (2) the department legally had failed to evaluate

violations on a program-by-program basis.[28]

In March 1976, NAFEO filed an annexed amicus brief in Judge Pratt's court opposing LDF's request for relief. NAFEO's brief opposed LDF's contention that compliance with Title VI required assimilation of black colleges into predominantly white institutions. NAFEO also argued that LDF's concern with elimination of the dual system was contrary to a state's prerogative to support and maintain "special purpose" institutions of higher education. The entry of NAFEO's brief reinforced its claim that, though LDF was recognized as a champion of civil rights, it could not serve as a spokesman for or represent interests of black colleges.

Another development occurred while LDF's motion for further relief was before the court. In April 1976, Pennsylvania intervened as a party defendant in the Adams case. Pennsylvania entered the case because it felt HEW's defense was not being conducted in that state's best interest. Furthermore, Pennsylvania felt that it would be unable to implement a desegregation plan that might be issued from the court for all the Adams states.

The New Adams Order

On January 17, 1977, Judge Pratt, presiding in the Adams case, held a hearing on LDF's motion for further relief. After listening to arguments, Judge Pratt granted LDF's motion with respect to six state systems (Arkansas, Florida, Georgia, North Carolina, Oklahoma, and Virginia). On January 28, 1977, the court required HEW to prepare new guidelines for these states to follow in redeveloping their statewide desegregation plans for submission. The other four Adams states were omitted from the order. Three of the states (Louisiana, Maryland, and Mississippi) were involved in pending litigation, while the other (Pennsylvania), because of special unresolved factual issues, chose to negotiate an out-of-court settlement.[29]

In ordering HEW to prepare new guidelines for states to follow, Judge Pratt indicated that new plans should include objectives, timetables, and

specific steps outlining implementation. Judge Pratt also ordered that plaintiffs and defendants work cooperatively in developing new specified requirements for desegregation plans and a timetable for their submission. The order also indicated that HEW would not be allowed to threaten states with enforcement proceedings under Title VI if states prepared and submitted their plans within specified time frames.

Although timetables contained in LDF's motion had long since passed, the response of Judge Pratt set a deadline date for developing guidelines for preparation of new statewide plans. In setting new deadlines, the court incorporated recommendations of LDF for HEW to follow. These recommendations included:

1. Increasing minority presence at predominantly white institutions by admitting a larger number of black students and by providing services aimed at retention.

2. Enhancing predominantly black institutions in terms of increasing or improving facilities and resources that are provided, and by ensuring that programs offered are of high quality.

3. Articulating how a significant percentage of other-race faculty will be needed, both in predominantly white and predominantly black institutions.

4. Increasing black presence on governing boards.

5. Reviewing institutional programs and ending duplication.

6. Developing, reporting, and monitoring mechanisms to evaluate progress in plan implementation.[30]

The order directed HEW to seek assistance from both LDF and representatives of black colleges to insure that objectives of the new criteria would be accomplished and that redevelopment of state plans would proceed as scheduled. To expedite the court's order, HEW and LDF met during the ensuing weeks. As a result of these meetings, however, neither LDF nor HEW could reach agreement as to how HEW could best accomplish development of the new desegregation guidelines.

Part of the reason that HEW and LDF could not reach an agreement was attributed to actions of the new Secretary of HEW, Joseph Califano. Following the January order, the Secretary asked Judge Pratt that he be given time (sixty days) to review the Adams litigation. Califano cited two reasons for the request: (1) because he was new to the post and (2) because of the difficulty experienced by HEW and LDF in reaching an agreement on new criteria. Judge Pratt granted the request and lengthened the period for the Secretary's review to ninety days. However, Judge Pratt did not make any further requirement that HEW seek assistance to develop guidelines. HEW, thus, was relieved of the court's obligation to collaborate in developing the direction the new planning process would take.

On April 1, 1977, Judge Pratt issued the supplemental order or final decision in the Adams case. The order directed HEW to notify Arkansas, Florida, Georgia, North Carolina, Oklahoma, and Virginia that their plans had not complied with Title Vi of the 1964 Civil Rights Act. The court gave HEW ninety days to transmit final guidelines for the desegregation plan to the six states, LDF, and the court.

The court then directed HEW to require each state to submit a revised desegregation plan within sixty days of receipt of the guidelines. Upon receipt of the plans, HEW, within 120 days then would notify the states as to whether plans were accepted or rejected. During this process, the court insisted that LDF have timely access to all desegregation documents submitted to HEW, including bi-annual reports required by the court order of February 16, 1973.

Along with issuance of the order, Judge Pratt released a letter submitted by NAFEO. Filed on March 3, 1977, the annexed statement was intended to serve as a policy guide to assist Judge Pratt in preparing the final decision in response to LDF's motion for further relief.

On July 5, 1977, Judge Pratt released criteria prepared by HEW in response to the April order. Entitled, "Criteria Specifying the Ingredients of Acceptable Plans to Desegregate State Systems of Public Higher Education," this document contained criteria established to guide preparation of new statewide desegregation plans. HEW's criteria reflects its effort to be responsive to the court's concerns, and are structured to insure that new plans address the following concerns:

1. Disestablishment of the structure that has kept the dual system of higher education in place.

2. Desegregation of student enrollment on a statewide basis to maximize access and completion for black students at all levels.

3. Desegregation of faculty, administrative staff, nonacademic personnel, and governing boards.

4. Commitments of the state to subjection to a monitoring process designed to see that progress will be made toward stated goals and objectives.[31]

Furthermore, HEW's document indicates standards by which the desegregation plan either will be accepted or rejected:

> "An acceptable plan shall commit the state to the goal of organizing and operating the system and institutions of higher education in a manner that promises realistically to overcome the effects of past discrimination and to disestablish the dual system and which assures that students will be attracted to each institution on the basis of educational programs and opportunities uninhibited by past practices of segregation."[32]

HEW's Office for Civil Rights bears responsibility for determining whether desegregation plans submitted to HEW meet requirements of the guidelines. OCR also will bear responsibility for monitoring progress of plans once they are approved. This process will consist of the following activities:

1. Evaluating plans, annual reports, and semi-annual reports against the stated criteria.

2. Conducting on-site reviews.

3. Processing complaints.

4. Conducting compliance reviews.

5. Issuing findings of facts.

6. Conducting formal and informal hearings.

If states do not submit acceptable plans, then OCR, under Title VI, is empowered to begin administrative proceedings that might result in (1) termination of outstanding grants of federal funds, (2) refusal to renew grants, or (3) halting consideration of applications for additional funding.[33]

Current Status of Statewide Plans

Only four of the six original Adams states under investigation in this study are affected by the recent Adams order: Florida, Virginia, Georgia, and North Carolina. Of these four, Florida is the only one which has submitted a fully acceptable plan.

The plans of the other four states were provisionally accepted because of issues related to duplication of programs and the enhancement of the historically black colleges. A summary of the status of these four states in implementing the recent Adams order follows.

Florida

The Florida plan proposes enhancing Florida A & M University (FAMU) through implementing new programs, strengthening existing programs and eliminating unnecessary duplication of programs. Concrete steps taken to implement these proposals include (1) the implementation of a Doctor of Pharmacy program, a master's program in architecture, a business adminsitration and a bachelor's program in journalism and construction technology and (2) the strengthening of existing programs in the area of nursing, journalism and media arts. In an effort to reduce the duplication of programs between FAMU, Florida State University and the University of Florida, Florida has taken the following action:

- termination of most of FAMU's programs in agriculture and economics, speech and hearing and library science;
- new program planning, authorization of new FAMU programs in business education (master's), landscape design (bachelor's), and the allied health fields and establishment of the goal of 85 percent passing for the registered nursing examination by 1982.

Georgia

The provisional acceptance of Georgia's desegregation plan was announced by HEW on March 8, 1978. HEW stated that the Georgia plan would not be fully accepted until the state completed and sumbitted to the Office of Civil Rights (HEW), a study on program duplication and merger. In November, 1978, the Office of Civil Rights informed Georgia that it must submit an acceptable plan for desegregating its public colleges and universities within 45 days or face administrative enforcement proceedings. OCR stated that Georgia had not submitted "acceptable provisions" with respect to Albany State College (a predominantly black institution) and that the plan "does not provide adequately for the enforcement of Albany State and for the elimination of educationally unnecessary duplication in program offerings between Albany State and nearby institutions, or for combining Albany State with one of their traditionally white institutions."[35]

Virginia

The provisional acceptance of Virginia's revised plan was announced by HEW in mid-March, 1978. With complete acceptance dependent upon the submission of a study of program duplications, and institutional improvement in the Tidewater area, the state of Virginia submitted the required studies to OCR in July, 1978. Based on the results of these studies, the Governor made a series of recommendations to the General Assembly regarding the improvement of Norfolk State and Virginia State Colleges.[36] Two of the recommendations were:

- Norfolk State will participate in the state's Eminent Scholars program. The purpose of this program is to attract "highly qualified faculty," with particular emphasis on adding qualified white faculty members. The state notes that attracting nationally recognized faculty will strengthen Norfolk State.

- Virginia State has proposed to the Virginia Council on Higher Education that it be given regional university status as an effort to enhance the image of the institution. Additionally, the state is considering transferring the School of Engineering Technology from Virginia Tech to Virginia State. New program proposals (19 in all) submitted from the college for implementation at the baccalaureate level include administration (1981), animal sciences and pre-veterinarian medicine (1980), theater and drama (1983), and agricultural education. At the master's level, proposed new programs include business administration and health education.

North Carolina

The North Carolina statewide plan was provisionally accepted by HEW in May, 1978, after a long process of intense negotiations between HEW and the state.[37] The plan will not be considered for full acceptance until North Carolina, like Virginia and Georgia, submits a program duplication study.

In a recent report, North Carolina summarized the progress it has made in desegregating its higher education system, including enhancement of the historically black college. Specific examples of the progress cited regarding the historically black college include:

- authorization of fifteen new Degree programs;
- establishment of a fund of $700,000 for the development of academic programs; and
- the allocation of $900,000 for the support of remedial education.

The new HEW guidelines have forced the Adams states to begin taking concrete steps toward enhancing the programs, faculties and physical plants of their historically black colleges. Much less progress has been made in ensuring the equitable access of blacks to all public higher education in these states and, further, parity at the end of the spectrum: attainment.

NOTES AND BIBLIOGRAPHY

1. The earliest case involving racial segregation in public education took place in 1850, Roberts v. City of Boston, 59, Mass. (5 Cush.) 198 (1950). This case upheld segregation as not in violation of a state constitutional guarantee of equality.

2. See Berea College v. Kentucky, 211 U.S. 45 (1908).

3. Henry A. Bullock, A History of Negro Education in the South: From 1619 to the Present (New York: Praeger Publishers, 1970), pp. 225-226.

4. Ibid., p. 25.

5. Ibid.

6. Many of the students called by the NAACP to act as plaintiffs in these cases were employed in the professions and the government.

7. The period in which these cases were filed was one of the most difficult in American history. For example, the 1930's witnessed the depression, the 1940's World War II, the early 1950's, the Red Scare.

8. Murray v. Maryland, 182, A 590 (1936); 169 Md. 478 (1937).

9. Richard Kluger, Simple Justice (New York: Alfred A. Knopf, 1976), pp. 192-194.

10. This case is known as Missouri ex rel Gaines v. Canada, 305 U.S. 337 (1938). The fourth edition of Black's Law Dictionary defines "ex re"; an abbreviation of "ex relations", as "legal proceedings which are instituted by the attorney general (or other proper person) in the name and behalf of the state, but on the information and at the instigation of an individual who has a private interest in the matter, are said to be taken 'on the relation' of such person who is called 'the relator'." Lloyd Gaines' case was instituted not by the attorney general, however, but by the NAACP, which exercised the plaintiff's prerogative of captioning his suit and apparently indulged in the then permitted formalism of invoking the state of Missouri as the party it believed legally obliged to act in Gaines' behalf by directing the state university not to deny him his right of admission.

11. Sipuel v. Oklahoma State Regents, 330 U.S. 631 (1948).

12. Sweatt v. Painter, 339 U.S. 629 (1950).

13. In 1939, under the leadership of Thurgood Marshall, the NAACP, in an attempt to take advantage of new laws granting tax-exempt status to non-profit organizations that did not have a lobbying function as their principal purpose, established the separate NAACP Legal Defense and Education Fund.

14. Simple Justice, pp. 260-261.

15. Ibid, p. 282.

16. John E. Fleming, The Lengthening Shadow of Slavery (Washington, D.C.; Howard University Press, 1976), p. 100.

17. The ramifications of HEW responsibilities under the Civil Rights Act of 1964 (Sec. 601 and 601 U.S.C.A. Section 2000d) and its involvement with the desegregation of public black colleges are discussed in an article by Jim Leeson, "Colleges and Choices", Southern Education Report 4, No. 3 (1968): 2-6.

18. "Ending Discrimination in Higher Education: A Report From Ten States", (Atlanta, Georgia: Southern Education Foundation, November, 1974), p. 7.

19. In preparation for the suit, LDF commissioned a team of black graduate students from the Howard Law School and the Massachusetts Institute of Technology's Department of Urban Studies and Planning to do research on the subject of desegregating higher education and to prepare a background report on public black colleges and universities. The research effort suggested that desegregation of statewide systems would fail if it resulted in a decrease in educational opportunity for black students.

20. Leonard L. Haynes, A Critical Examination of the Adams Case: A Source Book, (Washington, D.C.; Institute for Services to Education, 1978), p. A-18.

21. Ibid, p. B-4.

22. Ibid, p. D-8.

23. "Basic Components of State-Wide Higher Education Plans", published by the U. S. Government Printing Office for the Department of Health, Education and Welfare, December 2, 1974.

24. Op. Cit., p. 4-E-19.

25. Ibid, p. F-1.

26. Ibid.

27. See Appendix for the January 13, 1977, deposition of former OCR Director, Martin Gerry, who admitted that HEW had accepted inadequate plans, p. H-1.

28. On August 9, 1977, Mandel v. HEW was decided by the U. S. Fourth Circuit Court of Appeals. The Court ordered HEW to cease initiating enforcement proceedings against Maryland and directed HEW to submit new guidelines for Maryland's desegregation plan to follow.

29. The Court subsequently granted Pennsylvania's request to an out-of-court settlement.

30. Leonard L. Haynes, A Critical Examination of the Adams Case: A Source Book, (Washington, D.C.; Institute for Services to Education, 1978), p. F-1.

31. See Appendix K for full text of HEW criteria. The amended version of the criteria, published in the Federal Register 42, No. 15, (August 11, 1977) directed the states to include in the revised plans a commitment "to submit proposals for any major change in the operations by the state system which -ay directly or indirectly affect or impede the achievement of its desegregation goals (to the U.S. Office for Civil Rights) 90 days prior to their adoption." The provision was part of a section directing the state- to eliminate the duplication of programs by black and white institutions and to avoid changes in the state systems that could thwart desegregation, p. K-1.

32. Ibid.

33. The enforcement power under Title VI has never been fully used by OCR. There are many difficulties with carrying out a termination as it must follow certain steps. For example, any such action must be preceded by: (1) notice of alleged noncompliance to the offending recipient; (2) determination that voluntary compliance cannot be secured by voluntary means; (3) express finding on the record, after an opportunity for hearing, that the recipient is not, in fact, complying with the law; and (4) full written report to committees of the House and Senate having jurisdiction over the program or activity receiving federal aid, within which discrimination is alleged to have occurred. Even after these conditions are met, Section 602, 42 U.S.C. Section 2000d-1 provides that "no such action (terminating or otherwise restricting federal financial assistance) shall become effective until thirty days have elapsed after the filing of such report." Section 603 of the Act, 42 U.S.C. Section 2000d-2, provides further that any person aggrieved by such action (including any state) may obtain judicial review under the Administrative Procedure Act, and that no such action shall be deemed "committed to unreviewable agency discretion."

34. See Arkansas Statewide Plan Revised Supplement (March, 1978).

35. The Governor's recommendations are based on work done by the Virginia Council of Higher Education, the Virginia Office of Education, and the constituent public institutions.

36. North Carolina's plan for the two-year colleges and technical institutes had been accepted earlier. This plan related only to the four-year, graduate and professional institutions.

CHAPTER 3

The Determinants of Higher Education Enrollments

After more than a decade of astronomical growth, higher education enrollments have begun to level off.[1] This chapter presents a brief review of existing forecasts of the future demand for higher education, with emphasis on the 18-24 age-cohort, since this is the age group which generates almost 70 percent of total enrollments and approximately 80 percent of undergraduate enrollments.[2] A more detailed accounting is presented of empirical studies which identify those factors relevant to the size and nature of higher education enrollments.

Forecasts of Future Demand

The future of higher education appears bleak in light of the forecasts of several national data collection agencies and independent educational researchers.

The Census Bureau Series I projections of average life-time births per women (using the middle range between 1.7 - 2.7) and the Series II average of 2.1 births per woman, indicate a decrease in the 18-24 age cohort over the next two decades. Only a slight upward trend appears likely between 1995 and 2000 for this cohort.[3] The increase at the end of the twentieth century will not approach the high of 29.5 million 18-to-24 year olds projected by the Census Bureau for 1980.

Between 1980 and 2000, the 18-to-24 age-cohort is expected to evidence a decline of almost 5 million people (See Table 3.1). This decline will represent a loss of almost 16 percent in the number of persons traditionally viewed as college enrollees.

Although the size of the 18-to-24 age-cohort will decline, the rate of decline for whites will be higher than that for blacks (an average decline

TABLE 3-1

PROJECTED CHANGES IN 18-24 AGE COHORT, BY RACE (THROUGH 2000)
(In Thousands)

	1975	Perc't Change	1980	Perc't Change	1985	Perc't Change	1990	Perc't Change	1995	Perc't Change	2000
TOTAL	27,604	+6.7	29,462	-5.5	27,854	-9.7	25,148	-7.7	23,222	+6.2	24,653
WHITE			24,964	-6.8	23,259	-11.3	20,641	-9.2	18,736	+6.7	19,986
BLACK			3,869	-0.2	3,863	-5.1	3,665	-4.5	3,500	+1.4	3,549

SOURCE: U.S. Department of Commerce, Bureau of the Census, Population Projections, Series P-25, #704
(Series II projections used)

of 9.1 percent compared with 3.3 percent in the three five-year intervals from 1980 to 1995). By the same token, in the five-year period of increase in this cohort (between 1995 and 2000), the rate of increase for whites will be substantially higher than that for blacks, 6.7 percent as compared with 1.4 percent.

Chart 3.2 presents Census projections for 18-year-olds from 1976 to 1994, by race. As shown, the percentage distribution of black 18-year-olds is expected to increase through 1984, to drop slightly during 1985-1986, and to increase 1987 through 1991.

While the Census data provide the only source for projections of the college-age population by race, other reports have produced similar findings in terms of cohort projections. The Southern Regional Education Board (SREB), using regional projections derived by the National Planning Association estimates a 6.7 percent increase in the 18-to-24 age-cohort between 1975 and 1980 and, similar to Census projections, decreases between 1980 and 1990. (See Table 3.3)

SREB projections coincided with the projected decline of 18-to-24 year-olds cited by the Census Bureau, indicating a 5.5 percent decline in the size of this age group between 1980 and 2985 (See Table 3.3). Further, SREB projections suggest what can be expected for the 13 southern states included within its jurisdiction. Generally, the South as defined by SREB, is expected to experience an increase through 1978, followed by a decline in 1990. The projections suggest generally that:

> "the South is growing more between 1975 and 1985 and will be decreasing less between 1980 and 1985 than any other region in the United States. As a result, southern enrollments will come to make up a larger part of the nation's total enrollment in both 1980 and 2985 from 26 percent in 1975 to 27 percent in 1980 and 1985."[4]

With respect to the black colleges, SREB indicates:

> "...predominantly black colleges, which today enroll over 50 percent of black college students in the South, may be

TABLE 3-2

PROJECTIONS OF THE COLLEGE AGE POPULATION (18-24 YEAR OLDS)

	PERCENTAGE CHANGE		
	1975-1980	1980-1985	1985-1990
ENTIRE U.S.	+6.7	-5.5	-9.8
SOUTHERN REGION	+6.7	-3.4	-6.3

SOURCE: James R. Mingle, Fact Book on Higher Education in the South, 1975 and 1976, Southern Regional Education Board, 1976. (Adapted from the National Planning Association, Regional Projections, 1976.

> favored by the increased numbers of blacks choosing to go to college. Migration patterns, which could slightly reduce the proportions that blacks are of total population in the South, may mean that the relative increases in total black enrollment will be slowed numerically. Predominantly black colleges may maintain their 1974 eight percent share of total regional enrollment although this will be difficult with the keener competition from other colleges."[5]

The American Council on Education recently released projections on 18-year-olds through 1985.[6] Based on Census data, the ACE predicts a slight decrease (i.e., 34,000) in 18-year-olds (i.e., traditional age of high school graduates) between 1975 and 1980, and a larger decrease of 14.4 percent between 1980 and 1985 as compared to the 5.5 percent decline in the 18-to-24 age-cohort projected by the Census Bureau for the same period. Similarly, Freeman projects a decline in the traditional college-age cohort through 1985.[7] On the contrary, Allan Cartter projects an increase in the enrollment rates of the traditional college-age cohort between 1980 and 1990 while suggesting a 6 percent decline in overall total enrollments.[8]

Of particular interest to the present study are Freeman's predictions regarding black attainment:

> "Despite the dramatic improvement in the economic status of black college workers and those with graduate training, and the consequent increase in enrollments, blacks remained significantly underrepresented in the overall college work force in the 1970's. In 1974, when 9.5% of the population over 25 years of age was black, blacks constituted just 4.6% of those with college degrees. Because of the long working life of the average person, even if the black share of enrollments and new graduates continues to rise, the black-white gap in college attainment in the current work force guarantees continued underrepresentation through the year 2000."[9]

Because this study focuses on enrollment changes at the state level, the projections of SREB and ACE regarding the traditional college-age cohort are especially useful. All but one (Pennsylvania) of the states being considered are included in the report of the Southern Regional Education Board. In general, of the nine other states, only Florida is projected to evidence growth in the 18-to-24 age-cohort through 1990. This projected growth is also substantiated in ACE's study on projected 18-year-olds in 1985, which

CENSUS PROJECTIONS OF 18-YEAR-OLD BLACK AND OTHER NONWHITES IN THE UNITED STATES POPULATION BY ADMISSION YEARS FROM 1976 THROUGH 1994 (IN THOUSANDS)

Eighteen-Year-Olds

Admission Year	Total Number	Black		Other Nonwhites	
		Number	Percentage	Number	Percentage
1976	4,253	560	13.2	72	1.7
1977	4,244	573	13.5	76	1.8
1978	4,229	573	13.5	78	1.8
1979	4,292	583	13.6	83	1.9
1980	4,211	581	13.8	85	2.0
1981	4.145	580	14.0	87	2.1
1982	4,087	579	14.2	89	2.2
1983	3,917	569	14.5	92	2.3
1984	3,703	548	14.8	96	2.6
1985	3,604	525	14.6	96	2.7
1986	3,521	519	14.7	97	2.8
1987	3,567	530	14.8	101	2.8
1988	3,653	539	14.8	107	2.9
1989	3,733	566	15.2	117	3.1
1990	3,426	533	15.6	121	3.5
1991	3,240	514	15.9	122	3.8
1992	3,168	496	15.6	125	3.9
1993	3,247	506	15.6	127	3.9
1994	3,199	495	15.5	125	3.9

SOURCE: Carnegie Council on Policy Studies in Higher Education, Selective Admission In Higher Education (Washington,D.C: Jossey-Bass Publishers, 1977) p.154.

TABLE 3.4

PROJECTED CHANGES IN COLLEGE-AGE POPULATION (18-24 YEAR-OLDS) IN SELECTED STATES

STATE	1975-1980	1980-1985	1985-1990
ALABAMA	+1.6	-12.7	-16.6
FLORIDA	+21.1	+11.2	+9.1
GEORGIA	+5.0	-3.5	-7.3
MARYLAND	+9.1	+0.3	-9.0
NORTH CAROLINA	+3.4	-6.1	-8.6
PENNSYLVANIA	NA	NA	NA
SOUTH CAROLINA	-0.3	-10.8	-9.5
TENNESSEE	+2.7	-6.2	-10.1
TEXAS	+7.6	-2.6	-3.5
VIRGINIA	+6.5	-3.0	-9.1

SOURCE: James R. Mingle, Fact Book on Higher Education in the South, 1975 and 1976. Southern Regional Education Board, 1976. (Adapted from the National Planning A-sociation, Regional Projections, 1976.)

states that Florida is expected to be one of six states nationally which will increase their number of 18-year-olds, and witness a net in-migration of freshman students.

Table 3.4 provides projections of the 18-to-24 age-cohort through 1990, as reported by SREB for nine of the ten states. Data from ACE for 18-year-olds has been provided in Table 3.5, for the ten-year period from 1975 to 1985, along with SREB data on 18-to-24 year-olds during that same period.

As shown in Table 3.4, most of the ten states will experience population increases through 1980. Florida will increase its cohort by approximately 21 percent. Only South Carolina will show a decline (less than one percent). However, after 1980 and up until 1990, Florida is the one state that will show increases of any magnitude. In fact, with the exception of a slight 0.3 percent increase in Maryland for the period between 1980 and 1985, all of the other states will experience significant declines. The highest decline is expected in the states of Alabama and South Carolina, respectively.

Between 1975 and 1985, ACE shows similar trends with respect to 18-year-olds. (See Table 3.5) All states except Florida (14 percent) and Maryland (2 percent) will experience declines in this segment of their population. However, the SREB report, for that same period, indicates that five of the states under consideration will experience increases in their 18-to-24 year-old group and the other four, for which data are available, will show declines, although not to the same extent as those for the 18-year-old population.

Although the above national and state projections tend to differ slightly in the degree of enrollment change, all tend to underscore a pronounced decline in the 18-to-24 age-cohort through 1985 and beyond. Given the volatile nature of higher education today, such projections simply provide education planners with useful clues for anticipating and preparing for future needs.

TABLE 3.5

PROJECTED CHANGES IN 18-YEAR-OLDS AND 18-24 YEARS OLD POPULATION

1975 - 1985

STATE	PROJECTED CHANGE	
	18 YEAR OLDS[1]	18-24 year olds[2]
ALABAMA	-17%	-11%
FLORIDA	+14%	+35%
GEORGIA	-12%	+1%
MARYLAND	+2%	+9%
NORTH CAROLINA	-26%	-3%
PENNSYLVANIA	-19%	NA
SOUTH CAROLINA	-22%	-11%
TENNESSEE	-23%	-4%
TEXAS	-7%	+5%
VIRGINIA	-5%	+3%

1/ SOURCE: Cathy Henderson, Changes in Enrollment By 1985, Policy Analysis Service, American Council on Education, June 1977.

2/

FACTORS AFFECTING HIGHER EDUCATION ENROLLMENTS WITH AN EMPHASIS ON BLACK ENROLLMENTS

The preceding discussion of projected changes in the enrollment levels for higher education clearly underscores the critical role played by demographic factors (e.g., of the size the traditional college-age cohort play in shaping the demand for higher education. Hence, it is sufficient in this regard to reiterate here the difference in cohort trends by race. As indicated in Table 3.1, the size of the 18-to-24 age-cohort of the black population is expected to decline through 1985, but at a much slower rate than white 18-to-24 year olds, while black 18-year-olds are expected to increase through 1984. Consequently, black higher education enrollments should continue to expand well into the eighties, decline significantly between 1985 to 1995,and swing upward again between 2995 and 2000. The impact of this increase on the stability of higher education enrollments, if any, is difficult to predict. Similar to Freeman, Henderson and Plummer suggest that "given the proportionate increase of non-whites in the college-age population between 1975 and 1985, it follows that, if the overall participation rates remain lower than those of whites, total enrollment levels for college-age students are not likely to increase in the 1980's. If the participation and retention rates of blacks continue to rise, however, more stable enrollments at some colleges are projected."[10]

The literature indicates several factors other than the size of the college-age population as potential determinants of higher education enrollments in the decades ahead; these include economic, social, and legal issues.

The ACE study of changes in the 28-year-old population points out that, although the available pool of college-age persons plays a significant part in projecting potential college enrollees in the future. Student migration in and out of the selected states plays an equally important role. Using

data from the ACE study, Table 3.6 summarizes projected in-and out-migration with the projected impact of migration on the potential college enrollees in the ten states.

The column headed "Change in 18-Year-Old Population" provides the projected change in that population for each state between 1975 and 1985. The column headed "Net Impact on Freshman Enrollment," provides a sense of the impact of in-and out-migration, utilizing data for the projected portion of the 18-year-old population expected to enroll as freshmen in each state and data on the effect of migration patterns as compared with 1975 enrollments.

The data in Table 3.6 show that although three of the states, (i.e., North Carolina, Tennessee, and Texas) have projected declines in their 18-year-old population, the number of freshmen expected to enroll will increase over the 1975 freshman enrollments because of migration patterns. On the other hand, Maryland will experience a decline in freshman enrollments due to migration, even though its population of 18-year-olds is expected to increase. ACE reported 1975 NCES data which indicated that 15 to 18 percent of freshmen travel to other states to enroll, a percentage that is expected to remain stable between 1975 and 1985.

A look at increases in absolute numbers of the black populations of the 10 states between 1960 and 1975 may provide some clues to the meaning of the projected decline of 18-year-olds for blacks (Table 3.7). All states except Alabama showed an increase in their black population between 1960 and 1975; Alabama showed a 6.2 percent decline. Significant increases occurred in Maryland (60 percent), Florida (33.9 percent), Texas (28.8 percent) and Pennsylvania (23.0 percent). The data for Maryland and Florida seem to be consistent with expected increases in their 18-to-24 age-cohort (Table 3.4).

Although a substantial decrease occurred in the black population of Alabama between 1960 and 1975, the state still maintained a heavy concentration of blacks (25.4 percent) in 1975. Further, the substantial increases in the states

TABLE 3.6

COMPARISON OF POPULATION CHANGE AND MIGRATION PATTERNS PROJECTED FOR TEN SELECTED STATES, 1975-85

STATE	Change in 18-Year-Old Population 1975-1985	Net Impact on College Enrollment 1975-1985
ALABAMA	-17%	-1.2%
FLORIDA	+14%	+10.1%
GEORGIA	-12%	-5.8%
MARYLAND	+2%	-4.3%
NORTH CAROLINA	-26%	+0.2%
PENNSYLVANIA	-19%	-16.4%
SOUTH CAROLINA	-22%	-4.7%
TENNESSEE	-23%	+0.1%
TEXAS	-7%	+1.8%
VIRGINIA	-5%	-1.1%

SOURCE: Cathy Henderson, Changes in Enrollment By 1985, Policy Analysis Service, American Council on Education, June 1977.

of Maryland and Florida served to strengthen an already strong black representation in their populations. When the 1975 percentage distribution of blacks in the population of the three states is contrasted with their black higher education enrollments in 1976, the future of black enrollment appears promising, (See Table 3,8 for other state comparisons).

	Black Population Percentage 1975	Black Student Percentage 1976
Alabama	25.4	21.2
Maryland	20.1	17.7
Florida	14.2	11.5

Carlos Arce has completed the most comprehensive analysis to date of black enrollments as related to predominantly white institutions. Using bivariate correlations and distributions by strata, as well as predictive techniques, Arce identified several variables which appeared to impact changes in black enrollments, especially between 1968 and 1974: the enrollment gap/availability pool, and resistance amenability (see explanatory model). Specific findings were:

- The size of the available pool (as measured by the proportion of blacks locally and in the state) is strongly related to the level of enrollment in 1974 and to overall change; ...the strongest determinants are those that reflect the size of the local (rather that statewide) black populations (e.g., percentage of blacks in the overall population and in the schools of the congressional district and the county.

- Black institutions in locations where blacks suffer greater relative deprivation in educational attainment and family income enrolled larger proportions of black students in 1974 and increased black enrollment between 1968 and 1974. It appears that the greater black enrollment increases have occurred in places with more severe gaps by race for educational attainment and outcome.

- Institutions with greater commitments of funds to higher education have had smaller enrollment increases, especially in 1968 and 1970 and reached lower levels of black enrollments in 1974.

TABLE 3.7

PERCENTAGE CHANGE IN THE SIZE OF
THE BLACK POPULATIONS OF
TEN SELECTED STATES, BETWEEN 1960 and 1975,
BY RACE

SELECTED STATES	PERCENTAGE CHANGE	
	BLACK POPULATION	WHITE POPULATION
Alabama	-6.2	14.6
Florida	33.9	13.4
Georgia	14.7	28.7
Maryland	60.0	26.3
North Carolina	6.9	23.1
Pennsylvania	23.0	2.7
South Carolina	4.5	24.7
Tennessee	11.0	17.8
Texas	28.8	27.0
Virginia	14.0	27.5

SOURCE: Institute for Services to Education, Fact Book on Blacks In Higher Education, Spring, 1978.

> The South is very distinct from other regions. The only opportunity variable that determines black enrollment levels is the black percentage in schools in the congressional district relative to the black percentage in the total state. Similarly, only in the South is institutional selectivity strongly predictive of the 1974 level of black enrollments (positive relationships). This means that in the South, more selective institutions in 1974 enrolled higher proportions of blacks than non-selective institutions.[11]

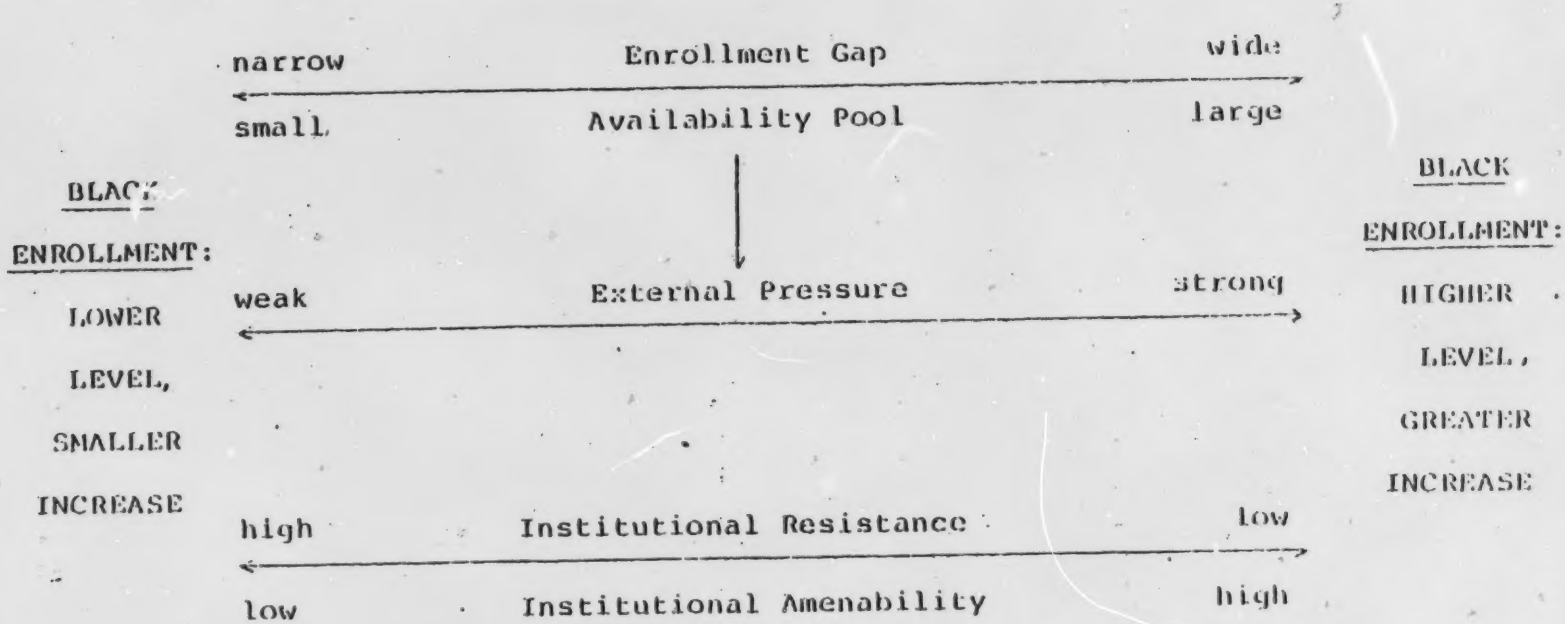
Arce concluded that external pressure was a major determinant of black enrollment levels and that increases tend to occur in institutions located in areas of severe underachievement. Among the examples of external pressure cited were black civl rights activism, student activism, the death of Dr. Martin Luther King, and governmental intervention.

Freeman poses that the state of the labor market has strong implications for the size of future higher education enrollments. Although a 10 to 13 percent increase occurred in the pool of available college graduates between 1960 and 1970, there was no discernible shift in the demand for professionally trained labor. By 1975, however, an additional 4 percent increase in college graduates, exacerbated by a sagging economy, brought to the forefront an unanticipated problem: a decline in the economic return of a college education. Hence, a growing proportion of recent college graduates are underemployed (i.e., working in fields which have not traditionally called for a college degree) or unemployed.

The potential impact of this situation becomes graphically clear when it is noted that, in 1977, 77 percent of the first-time freshmen indicated that their decision to go to college was based on the desire to get a better job. The problem becomes even more ominous for blacks, who have always viewed a college education as the key to upward mobility while facing tremendous odds in terms of entering occupational fields which were traditionally excluded from blacks at levels which have been historically reserved for whites. The unemployment rates of black college graduates almost tripled from 1970 to

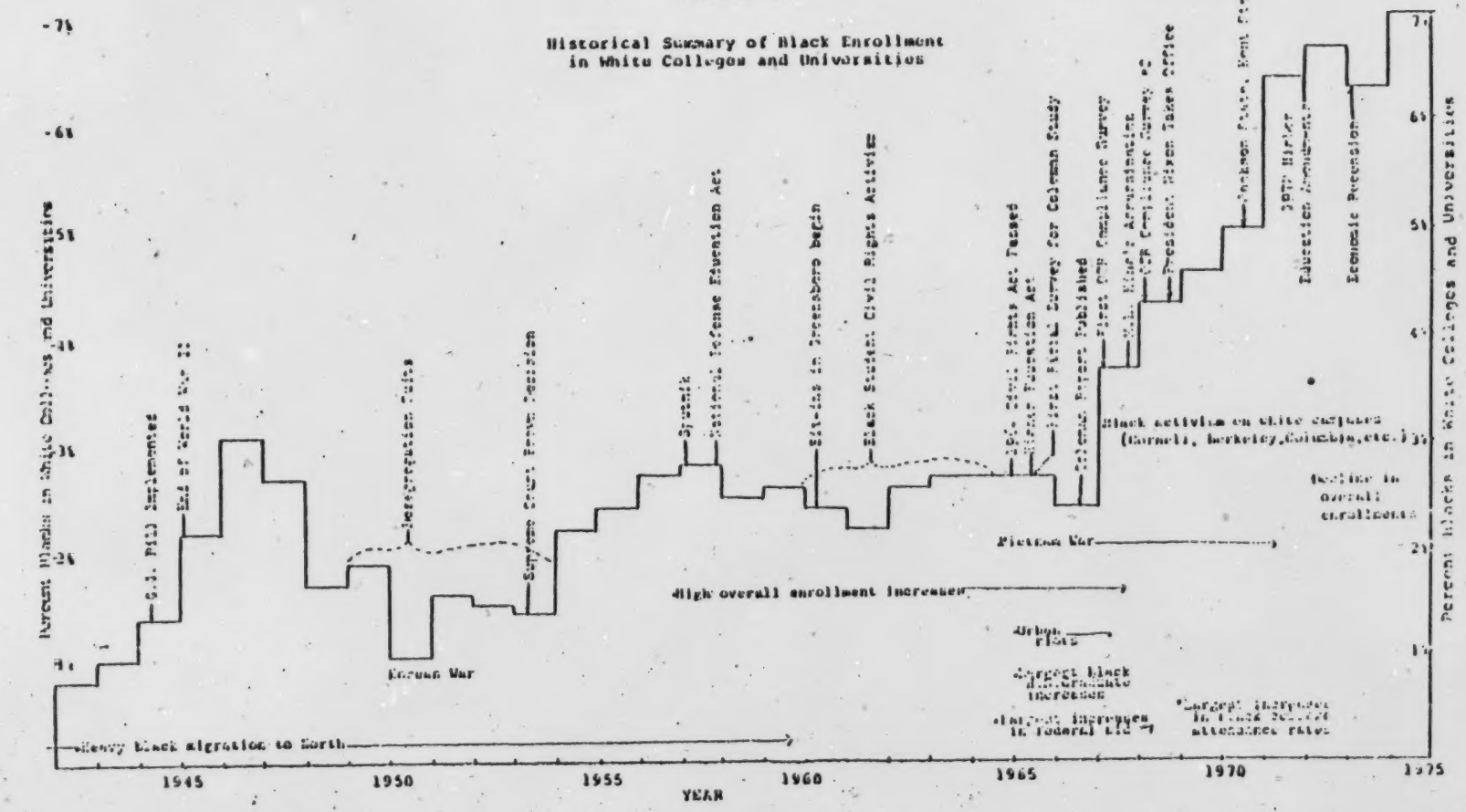
FIGURE 1

Model of Dimension of Impact of Determinants on Black Enrollment



SOURCE: Carlos Arce, Institutional and Contextual Determinants, Black Enrollments in Predominantly White Colleges and Universities, 1946 to 1974, A Doctoral Dissertation, 1976.

FIGURE 2



SOURCE: See Figure 1.

TABLE 3.8

COMPARISON OF BLACK DISTRIBUTION IN TEN SELECTED STATES, BY POPULATION AND HIGHER EDUCATION ENROLLMENT

STATE	BLACK POPULATION PERCENTAGE DISTRIBUTION (1975)[1]	BLACK STUDENT PERCENTAGE DISTRIBUTION[2] (1976)
Alabama	25.4	21.2
Florida	14.2	11.5
Georgia	26.1	18.3
Maryland	20.1	17.7
North Carolina	21.9	19.1
Pennsylvania	8.8	6.8
South Carolina	30.8	21.7
Tennessee	15.6	14.6
Texas	12.5	9.8
Virginia	18.7	14.7

SOURCE:

[1]Institute for Services to Education, Fact Book on Blacks in Higher Education, Spring, 1978.

[2]Institute for Services to Education, Fact Book on Blacks in Higher Education, Spring, 1978.

1975 (climbing from 1.4 to 4.0 percent), while that for whites almost doubled (1.5 to 2.8 percent).[13]

As discussed in Chapter 4, Freeman uses a three-equation recursive forecasting system to examine the relationship between enrollments and the supply as opposed to the demand for educated workers. Factoring in the current oversupply of college graduates, Freeman projects that enrollments will decline through the mid-eighties, when a decline in the supply of college graduates will both sharpen the economic value of degrees and stimulate enrollments.

Froomkin is less optimistic than Freeman. He states:

> "The most likely projections of the employment of college graduates between 1975 and 1985 indicated that their share of employment will increase from 10 to 15 percent in the profit sector. The private sector is likely to supply some 60 percent of the total jobs filled by new entrants with this level education. Thus, a complete turnaround in the employment patterns of college graduates is anticipated."[14]

A recent survey of ACE indicated that more than 1.9 million students received financial aid from the five federal student aid programs in 1976, 73 percent of which were enrolled in public institutions and 35 percent of which were blacks and other minorities.[15] In fall 1976, 14.2 percent of the entering freshmen were recipients of Basic Educational Opportunity Grants (the third largest source of aid) and as many as 18.0 percent of them reported part-time employment.[16] In fall 1977, almost two-thirds of all entering freshmen indicated that they were uncertain about financial support for their education.[17]

These data suggest that student financial aid is a factor of consequence in terms of access to higher education. This is particularly true in the case of students attending historically black colleges, where, as Williams states:

> "In 1977, approximately 70 percent of the students enrolled in the historically black colleges received student financial aid. Additionally, surveys of these colleges indicate that 70 percent of those students who are admitted and fail to enter college are hampered by inadequate financial resources."[18]

The heavy dependence of these students on student financial aid is a reflection of their low family incomes, as indicated by Henning in a recent study of three generations of students attending the historically black colleges. Henning found that: ...in

> "...in 1969, sixty-eight percent (68%) of the students reported family incomes below $6,200 annually. Seventy percent (70%) of the family incomes of the 1970 cohort were below the same level. The 1975 group reported 62% below $6,200 annually. Although this does appear to represent an increase in family incomes, the increase is more apparent than real because of the net effect of inflation."[19]

To further underscore the significance of student financial aid, an estimated 7.9 billion dollars were spent for federal aid to students in 1977, as contrasted with 1.5 billion in 1968 and 8.2 billion dollars in 1976.[20] Of the 1976 amount, 52.6 percent was spent for veteran's readjustment benefits; 19.0 percent, for basic educational opportunity work study and supplementary grants; and 12.2 percent, for social security grants.[21]

The importance of student financial aid to blacks generally is aptly summarized by Blake:

> "The impact of federal aid in equal opportunity in higher education has been enormous. It is safe to say that without federal student financial aid programs, the increase in access for blacks at the postsecondary level could not have occurred. Even where there is substantial state aid, the withdrawal of federal funds would be disasterous and catastrophic for blacks."[22]

Appropriate comment must be made on the rising call from middle-income parents for assistance in meeting college costs. Federal response to calls has generated debate and action relative to two approaches: (1) the tax credit or (2) middle-income student aid. In August 1978 the Senate passed a college-tuition bill (HR 12050) which would allow credits up to $250 for tuition and fees of undergraduate college and postsecondary vocational students. The Senate also passed the middle-income student aid bill, which would facilitate a 1.3 billion dollar expansion of existing aid programs in order to meet the financial needs of an additional 1.5 million students

Although complete data regarding the retention rates of blacks are scarce, the available data suggest that significant numbers of blacks are lost prior to the twelfth year of school. According to NCES, only 48.5 percent of the blacks 25 and over, as contrasted with 67.0 percent of whites in the same age group completed four-years of high school or more in March 1977--a disparity of 19.5 percent. Fincher, [25] in addressing the spectrum of education of blacks beyond 17 years of age suggests that: of every 100 18-year-old whites in the United States, about 75 finish high school, about 45 enter college, and about 15 earn a baccalaureate degree.* Of every 100 black 18-year-olds, about 65 finish high school, approximately thirty enter college, and about 5 earn a degree. To exacerbate this situation further, a recent study of the National Assessment of Educational Progress[26] revealed that 42 percent of the black 17-year-olds were functionally illiterate as contrasted with 8 percent of the same age group for whites.

Alexander Astin[27] comments on the college drop-out rates of blacks in Preventing Students from Dropping Out. Astin found that 49.5 percent of the blacks in white colleges dropped out as compared to 37.0 percent of the blacks in black colleges, and that the overall drop-out rate for blacks was 29 percent as compared to 24 percent for whites.

All of these factors seem to lead to the conclusion that access, if it is to be equitable, has a much larger meaning, which addresses itself to output. The output record for blacks at the end of the ninth year of school through graduate and professional school suggest that only disproportionate access for blacks can begin to eradicate the disparity implicit in defective schooling. (See education flow chart)

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*The 1977-78 Digest of Educational Statistics indicates that "for every 10 pupils in the fifth grade in fall 1968, 9.8 entered the nineth grade in fall 1972, 8.7 entered the 11th grade in fall 1974, 7.5 graduated from high school in 1976, 4.7 entered college in fall 1976 and 2.4 are likely to earn bachelor's degrees in 1980."

(middle-income). Congress passed the latter bill in October, 1978.

Because of inadequate financial support and a number of other reasons, many persons delay entering college, thereby contributing to the boom in part-time and non-degree study -- or adult education. Generally, approximately 17.0 million persons were adult education participants in 1975-1976, 6.3 percent of whom were part-time students. The Carnegie Foundation for the Advancement of Teaching projects that, "part-time degree-credit study will grow slightly faster than full-time study and non-degree credit study will continue to grow substantially relative to full-time degree credit study,".[23] McPherson, however, suggests that the size of "nontraditional clienteles" will begin to decline in the mid-eighties because of three factors: (1) the size of the 25-34 age-cohort is beginning to level off; (2) the attendance rates of veterans will begin to decline; and (3) as mentioned several times before, the value of a college degree will continue to drop a significant number of years.[24] Nonetheless, these new pools of postsecondary education participants do offer a viable alternative to declines in the traditional-age college population.

Other factors of special significance to black access to postsecondary education include the aspirations of college seniors, high school graduation rates, college-going rates and pre-college experience. An examination of these factors by race, when possible, points to disparities which reduce the life chances of blacks. In an examination of the educational plans of high school seniors, NCES found that in 1975, 40.5 percent of the black seniors 14-to-34 years-old, as opposed to 49.4 percent of the white seniors in the same age group planned to attend college; but that, of the 18-24 year olds interested in attending school in 1976, 56 percent were black and 43 percent were white.

This last statement is an appropriate lead into the implications of public policy for future enrollments. Much of the expansion in higher education enrollments during the past twenty years can be attributed to a national commitment to universal access. Legislation such as the G.I. Bill of 1944, the Economic Opportunity Act of 1964, the Higher Education Act of 1965 and the Education Amendments of 1972 all contributed to the enrollment bulge of the sixties and early seventies.* Additionally, the Higher Education Facilities Act of 1963 laid the foundation for the accelerated expansion of the physical plants of existing colleges and universities and the birth of new institutions. Consequently, the federal investment in higher education is such that any discernible shift in funding support could serve to significantly alter the direction of future enrollments generally.

Similarly, state policies play an important role in determining enrollments, since it is the states which exert primary control over the higher education systems of the nation. In an effort to cope with diminishing enrollments, many states have enacted policies designed to (a) reduce the number of out-of-state students (e.g., enrollment ceilings for out-of-state students with an increase in the cost of education for such students, and (b) encourage in-state students to attend local institutions (e.g., state scholarships limited to in-state students). Such policies have far-reaching implications for the enrollments of states which are classified as net exporters (e.g., Pennsylvania) and net importers (e.g., Florida).

The impact of general public policy on black enrollments is another issue. History has shown that dramatic increases in black enrollment in higher education, especially in predominantly white institutions, has usually

*Another example is the National Defense Education Act of 1958, which was enacted in response to the launching of Sputnik. This act was designed to facilitate the establishment of science as a national priority through providing assistance to (1) state and local school systems for strengthening instruction in science, mathematics, as well as (2) higher education by providing student loans and fellowships, foreign language institutes and advanced foreign language study.

resulted from external pressure, (e.g., civil rights activism) followed by support through federal legislation (e.g., Civil Rights Act of 1964), the courts (e.g., the Adams mandate of April 1, 1977) or both. The recent Adams order and the HEW criteria regarding the desegregation of public higher education will certainly impact black enrollments in the affected states - given the states comply in ways supportive of black opportunity, including the implementation of state policies that facilitate raising the retention and attainment rates of blacks throughout their higher education systems. This study is designed to facilitate the statewide planning processes of the Adams states by examining and clarifying issues related to equal opportunity for blacks as well as projecting the enrollments of six to the original Adams states by race.

In summary, trends expected to produce significant declines in the college-age population, as well as the anticipated in-and out-migration patterns,. confirm the need for careful planning in the determination of higher education enrollments in the future. Since the traditional college-age population will decline, institutions will probably continue to seek a new student body mix. However, in terms of the desegregation of the colleges in the states examined in this report, the traditional measure of parity has been based on the pool of high school graduates available for and going on to college. Although individual state data are not available for black and white 18-to-24 year-olds, the summary data show that declines are expected for both groups in the age-cohort, but more so for whites.

State-by-state data on the differences in this population for these racial groups must be explored to determine the extent of such differences, if any. Migration patterns must also be investigated to determine if the pattern for black students is similar to that of whites, or if important differences can be found which will impact plans for desegregating the various institutions. This will be necessary when projecting enrollments and determining

TABLE 3-8

PERCENT OF CHILDREN NOT ENROLLED IN SCHOOL
(1970 Census)

STATE	WHITE			NON-WHITE		
	7-15 Yrs.	16-17 Yrs.	TOTAL	7-15 Yrs.	16-17 Yrs.	TOTAL
ALABAMA	4.4	15.2	6.3	5.4	10.0	6.2
FLORIDA	3.1	12.0	4.6	4.5	16.5	6.4
GEORGIA	4.1	17.1	6.3	5.6	20.2	8.1
MARYLAND	1.9	9.1	3.1	3.7	14.5	5.4
NORTH CAROLINA	3.9	15.6	6.0	5.1	17.3	7.3
PENNSYLVANIA	2.3	7.9	3.3	3.4	12.7	4.9
SOUTH CAROLINA	4.6	17.4	6.9	5.5	16.4	7.5
TENNESSEE	4.8	17.1	7.0	4.7	14.0	6.3
TEXAS	3.5	12.8	5.1	4.5	15.6	6.4
VIRGINIA	3.0	11.7	4.5	4.8	16.0	6.7

SOURCE: Children's Defense Fund, Children Out of School in America, Cambridge, Massachusetts, October, 1974.

if specific goals, as outlined within the individual state plans, can be met. State goals for black students must focus on the enrollment of the traditional college-going group, as well as on the part-time, continuing education (often older) enrollees who have been attracted back to school by various advertising campaigns and current trends.

The level at which black students enroll has been under increasing scrutiny since a large proportion of black students enroll in two-year colleges. This pattern for blacks has often been attributed to the prohibitive costs of college, inadequate preparation for four-year colleges, and the close proximity of two-year and community colleges. The state of Florida has one of the largest community college systems in the country and, no doubt, will draw many of its black students into that system. States must consider this fact as well in determining equality of opportunity to black students. Otherwise, black students may continue to enroll and states may continue to show progress in terms of access, but there may be no distinguishable impact in terms of outcomes and movement into higher socio-economic levels of the population.

Other factors must be considered when projecting the pool of available high school graduates. Preparation for college is extremely important. Data from the National Longitudinal Study of the Class of 1972 show that only 27 percent of the black students were in an academic program in high school compared with 48 percent for their white counterparts.

Currently, institutions of higher education are relying more on test scores in admitting students. This factor must be taken into account since black students on the whole tend to score lower on standardized tests than white students.

Another significant trend is the increase in the proportion of black 18 and 19 year-olds who are not enrolled in school and who are not high school graduates. Data from the Census Bureau (Series P-20, School Enrollment-Social

and Economic Characteristics of Students) show that between 1967 and 1974, the proportion of black males and white males not in school and not high school graduates declined. In 1975, however, the proportion of 18-19 year-old white males who were neither in school nor high school graduates, continued to decline while for black males the percentage increased by 4.3 percent to 27.9 percent in the one year between 1974 and 1975. The pattern for black females not enrolled in school and not high school graduates in 1975 (see Social Indicators for 1975) was 28.4 percent higher than any other group, including black males.

In the ten selected states, data were available from the Children's Defense Fund study on children who were not in school based on the 1970 Census. (See Table 3.9) Every state but Alabama showed a higher proportion of non-white students out of school than white students, for reasons including long-term suspensions or expulsions, drop-outs, pregnancy, and unmet special education needs. While Public Law 94-142 will move toward solutions to the problems in special education, the other causes of non-enrollment must be dealt with if black students are to finish high school and to be in a position to seriously consider enrolling in higher education.

FOOTNOTES

1. Total enrollments in higher education more than doubled in the past 14 years, climbing from 5.9 million students in 1965 to 11.4 million students in 1977. (See A Fact Book on Higher Education, Enrollment Data, Second Issue 1977, Washington, D.C.: American Curriculum Education), p. 77-81. In fall 1978, total enrollments declined for a second time in three years. A 0.5 percent decrease was reported, as compared to a 1.5 percent decline reported for fall 1976. (See National Center for Education Statistics Bulletin, "Fall Enrollments in Colleges and Universities, 1978," December 1978).

   Black enrollments have also increased significantly, growing from 4 percent in 1967 to 9.3 percent in 1976. In 1976, 41.5 percent of the 1.0 million blacks in higher education were enrolled in two-year institutions. (See Institute for Services to Education, A Fact Book On Blacks in Higher Education, Spring, 1978).

2. Current Population Reports Population Characteristics, Series P-20, No. 303, Issued December, 1976, School Enrollment Social and Economic Characteristics of Students: October, 1978, pp. 4-5.

3. U.S. Department of Commerce, Bureau of Census, Population Projection Series, P-25, #704 (Series II projections used).

4. Southern Regional Education Board, A Profile of Higher Education in The South in 1985, 1977, pp. 2 and 5.

5. Ibid. p. 23

6. American Council on Education Changes in Enrollments by 1985, Policy Analysis Service Reports, Vol. 3, No. 1, p.12.

7. Richard B. Freeman, The Overeducated American, (Academic Press) 1976.

8. Allen Cartter, Ph.D's and the Academic Labor Marketplace (McGraw-Hill Book Company) 1976.

9. Richard B. Freeman, Ibid.

10. Cathy Henderson and Janet C. Plummer, Adapting To Changes in the Characteristics of College Age Youth, Policy Analysis Service Reports, Vol. 4, No. 2, (Washington, D.C.: American Council on Education, December, 1978), p.7.

11. Carlos Arce, Institutional and Contextual Determinants Black Enrollments in Predominantly White Colleges and Universities 1946 and 1974. A Doctoral Dissertation 1976. pp.268-285.

12. National Center for Educational Statistics, The Condition of Education, 1978, p.112.

13. National Center for Educational Statistics, The Condition of Education, 1977.

14. Joseph Fromkin, Needed: A New Federal Policy in Higher Education, (Washington, D. C., Institute for Educational Leadership, The George Washington University) 1978, p.7.

15. Frank J. Atelsck and Irene L. Gomberg, Estimated Number of Student Aid Recipients, Higher Education Panel Reports, Number 36-7, American Council on Education, September 1977.

16. National Center for Educational Statistics, Digest of Educational Statistics.

17. National Center for Educational Statistics, Digest of Educational Statistics.

18. Mary Carter Williams, Profile of Enrollments in the Historically Black Colleges 1977 (Washington, D. C.: Institute for Services to Education), p. 17.

19. Ibid. p. 18.

20. National Center for Educational Statistics, The Condition of Education 1978, p. 242.

21. Ibid. p. 242

22. Elias Blake, "Federal Policy and the Goals of Equal Opportunity" Beyond Desegregation: Urgent Issues in the Education of Minorities (New York: College Entrance Examination Board) 1977, p. 31.

23. Carnegie Council on the Advancement of Teaching, More Than Survival Prospects for Higher Education (Washington, D.C.: Jossey-Bass Publishers) 2976, p. 65.

24. Michael J. McPherson, "The Demand for Higher Education," Chapter 3 of Public Policy and Private Higher Education edited by David W. Breneman and Chester E. Finn, Jr., with the assistance of Susan C. Nelson (Washington, D.C.: The Brookings Institution) 1978, p. 155.

25. Cameron Fincher, Minority Access and Retention in Higher Education. A report prepared for the American Council on Education, 1975.

26. Inequalities in the Educational Experiences of Black Americans, Congress of the United States, Congressional Budget Office, (Washington, D.C.), September, 1977.

27. Alexander Astin, Preventing Students From Dropping Out Washington, D.C.: Jossey-Bass Publishers, 1975.

CHAPTER 4

Review of Methods of Projecting Higher Education Enrollments

The following review summarizes the projection methodologies utilized by recognized public and private agencies as well as by individual educational researchers. Also included is a typology of various projection techniques and a discussion of their respective advantages and disadvantages. The chapter ends with a discussion of the projections included in the state plans of Georgia, Florida, North Carolina and Virginia.

Public and Private Agencies

A number of government agencies and national associations concerned with postsecondary education have generated projections of higher education enrollments. Notable among these agencies is the National Center for Education, U.S. Office of Education (NCES/USOE), the Carnegie Commission on Higher Education, and the Southern Regional Education Board.

For the past decade or so, NCES/USOE has issued an annual projection of enrollment statistics under the title Projection of Education Statistics. The projections are always limited to a ten-year horizon and are national in scope. Although NCES projections are generally identified as using the ratio approach to projecting, an analysis of their methodology, using the information contained in Table 4.7 as a guideline, suggests that the statistical techniques are drawn from both time-series and ratio projection methods, which by description are not mutually exclusive. NCES/USOE projections are limited to breakdowns by sex, attendance status, institutional control and type, and degree-credit status.

The ommission of race as a variable in the NCES/USOE projections limits their usefulness to state planners in projecting plans for the desegregation

of state systems of higher education. Moreover, it has been demonstrated that NCES/USOE projections are subject to a large degree of error since concentration is on demographic factors to the exclusion of other impacting variables (e.g., changes in the economy). This is evident in the year-to-year shifts in NCES/USOE projections. In 1971, NCES projected a 54.7% increase in pre-baccalaureate enrollment from 1970 to 1980 (see Table 4.1). This figure was adjusted downward in succeeding years, until it reached a low of 22.6% in 1973. By 1977, the projected percentage change in enrollment from 1970-80 (54.0%) approached within seven-tenths of one percent the 1971 projection.

TABLE 4.1

NCES Projections of Percentage Change

In Pre-bacculaureate Enrollment, For Decade 1970-80

Year of Projection	Projected Percentage Change
1971	54.7
1972	43.2
1973	22.6
1976	38.1
1977	54.0

Source: Projection of Education Statistics, 1971,1972,1973, 1976, and 1977, respectively (Washington, D.C.: U.S. Office of Education, National Center for Education).

The U.S. Census Bureau, which generated periodic enrollment projections in the 1960s, has not issued such a report since 1972. However, the Bureau routinely estimates the nation's population according to numerous subgroups (e.g., sex, ethnic-racial group, age-cohorts) and, based on delineated assumptions, projects the population of these groups into the future. Census Bureau statistics, therefore, are often used by educational researchers as the basis for making enrollment forecasts.

In making its population projections, the Census Bureau utilizes methods which involve theuse of vital statistics (i.e., birth and death rates) and net migration rates in conjunction with previous census enumerations. Assumptions underlying Bureau projections are frequently updated to reflect current trends. Nevertheless, many of their suppositions are subjective and, therefore, less predictable -- one of the more crucial being related to "completed cohort fertility" (average number of births per woman after completion of the child-bearing years). According to Berendzen (1974);

> "Each time the Bureau has projected the population it has used several fertility rates, ranging from the lowest seemingly probable levels to the highest. But over the years what have seemed to be likely limits for these bounds have changed as the rates have invariably become smaller."[1]

In light of the unpredictability of completed cohort fertility, the Bureau, in 1974, added a Series F to its projections, which assumes a rate of 1.8 births per woman. The Census Bureau also publishes the report on School Enrollment: Social and Economic Characteristics of Students periodically. These reports present estimates of school enrollments nationally, broken down by a number of variables (e.g., sex, ethnic-racial group, etc.).

The Carnegie Commission on Higher Education has released two reports (see Selected Bibliography) which project national enrollments through the end of the century. Although the discussion of statistical techniques employed

in making the projections is somewhat vague, it appears that, similar to NCES, the Carnegie Commission used a combination of ratio and time-series methods-methods which are based solely on demographic trend data. The unreliability of this approach was reflected in the Carnegie Commission's final report, which states:

> "Here (regarding enrollment patterns) is one major area where we wish to reconsider our earlier predictions and recommendations...We are among the first to call attention several years ago to the 1980's as a "stop" period after a century when enrollments had doubled every 10 to 15 years. But we did not anticipate that the declining rate of enrollment increases would occur so soon and so fast in the 1970's or that the 1990's might turn out to be such a period of continuing slow growth in enrollments, as now seems possible. We expected a new surge ahead beginning about 1990--a new "go" period. We spoke of "new uncertainties" when we were making our earlier predictions, but we did not expect they would come so soon or be so uncertain. The upward rate of enrollment ratios among white males has turned down, at least temporarily, and the birth rate has dropped drastically, among other factors."[2]

Within a two-year period, Carnegie projections were adjusted downward by 12 percent (1.5 million students by 1980) due to changes in birth and college participation rates. (See Table 4.2)

However, the Carnegie base-line projections are based on a broad array of assumptions, including expanding enrollment rates based on past trends related to, "part-time students, non-degree-credit students, students 22 years of age and older, graduate and first professional degree students, women students and black and other minority students."[3] Other assumptions of import are:

- That white male enrollment rates will return to their peak levels of the late 1960's by the year 2000.
- That Series F projections of the population may prove to be reasonably reliable.
- That the demand for school teachers will reflect current pupil-to-teacher ratios.
- That the draft will not be reinstated.

. That student aid will continue to rise in accordance with the provisions of current legislation and that funds now going to veterans who, as students, will be shifted to non-veteran status as Vietnam war veterans move into older age groups and enrollment of veterans declines.[4]

For more than a decade the Southern Regional Education Board has documented the growth of higher education in the South and, simultaneously, provided projections of enrollments for this region. The SREB states include: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Texas, Virginia and West Virginia. Although the SREB projections, like most national and regional projections, are not broken out by race, they are important in examining black enrollments because of the high concentration of blacks in most of the SREB states.

The latest SREB projections entitled, A Profile of Higher Education in the South in 1985, are based on the projections of the National Planning Association (NPA).[5] Assuming that the state total enrollment as a percentage of the 18-to-24 age-cohort would increase at the same rate as that used by NCES for projecting enrollment for 1984-1985, SREB increased the 1975 state ratios for the 1980 projections by 4.5 percent and for the 1985 projections

TABLE 4.2

Projected Total College Enrollments

Total Enrollment in 1000's

	1970	1980	1990	2000
Original Projection C	8,649	13,015	12,654	16,559
Revised Projection	8,649	11,446	10,555	13,209

Source: Carnegie Commission on Higher Education, Priorities for Action, Table A-3.

by 6 percent. These ratios were then applied to NPA's 18-to-24 age-cohort projections for each state.

Literature Review

Cartter, in making enrollment projections through the year 2000, used a variation of the ratio method, which incorporated some of the postulates and techniques used in both time-series and causal methods. Projections of undergraduate and graduate enrollments were made separately by using fixed-coefficients recursive-enrollment models. Specifically, undergraduate enrollments were computed on the basis of a fixed-coefficients model in which long-term trends in the relationship between high-school graduation, college entrance, and degree completion were identified and projected into the future. In using this technique, Cartter assumed that student behavior at the undergraduate level is not significantly affected by external factors. Based on alternative hypotheses, Cartter presents five projection series (A-E), with Series E representing the high and Series A, the low (See Table 4.3).

In making projections of graduate enrollments, Cartter assumed that students are much more responsive to current expectations concerning career opportunities. For this reason, a variable-coefficients recursive-enrollment model was used to reflect the influence of market forces. Specifically, the formula for projecting first-year graduate enrollments included varying alternatives of the following three elements:

- A constant trend, independent of market conditions, whereby, the ratio of first-year students to B.A.'s rises by .01 annually, beginning at .33 in 1955.
- A factor reflecting research and development demand for scientists, where one graduate enrollment would result for each $335,000 of current research and development spending.
- A factor reflecting the number of junior academic positions opening each year, where 2.75 first-year students would be enrolled for every current opening (based on a three-year average).

Table 4.3
ACTUAL AND PROJECTED FTE UNDERGRADUATE DEGREE-CREDIT ENROLLMENT
TO 2000 UNDER FIVE ALTERNATIVES

Year	Series A	Series B	Series C	Series D	Series E
Actual					
1960			2,535		
1961			2,763		
1962			2,972		
1963			3,163		
1964			3,493		
1965			3,966		
1966			4,256		
1967			4,582		
1968			4,977		
1969			5,336		
1970			5,556		
1971			5,753		
1972			5,764		
Projected					
1973	5,852	5,852	5,852	5,852	5,852
1974	5,833	5,898	6,902	5,944	5,944
1975	5,971	6,014	6,037	6,110	6,125
1976	5,983	6,145	6,103	6,292	6,334
1977	6,177	6,289	6,353	6,478	6,564
1978	6,266	6,421	6,522	6,639	6,763
1979	6,387	6,582	6,719	6,850	7,018
1980	6,470	6,704	6,380	7,012	7,219
1981	6,478	6,743	6,950	7,090	7,316
1982	6,458	6,759	6,993	7,141	7,353
1983	6,338	6,657	6,919	7,079	7,316
1984	6,178	6,505	6,794	6,962	7,198
1985	5,987	6,318	6,642	6,809	7,032
1986	5,811	6,135	6,486	6,661	6,875
1987	5,729	6,053	6,433	6,646	5,821
1988	5,733	6,057	6,488	6,720	8,856
1989	5,772	6,088	6,633	6,829	6,933
1990	5,682	6,002	6,493	6,782	6,837
1991	5,460	5,764	6,233	6,552	6,603
1992	5,269	5,561	6,053	6,357	6,380
1993	5,156	5,444	5,937	6,228	6,240
1994	5,335	5,452	5,937	6,248	6,252
1995	5,210	5,495	6,051	6,302	6,302
1996	5,277	5,573	6,162	6,396	6,400
1997	5,390	5,694	6,299	6,525	6,525
1998	5,507	5,815	6,451	6,669	6,669
1999	5,620	5,928	6,583	6,802	6,802
2000	5,710	6,029	6,898	6,919	6,919

Source: Alan M. Cartter, Ph.D.'s and The Academic Labor Market (New York: McGraw-Hill Book Co., 1976).

TABLE 4.4

FIRST-YEAR GRADUATE ENROLLMENTS UNDER ALTERNATIVE PROJECTION MODELS

(enrollments in thousands)

	Alternative models				First-year students: B.A.'s			
	Extrapolation model	I	II	III	Extrapolation model	I	II	III
1973	569	567	565	560	.64	.64	.64	.63
1974	625	597	590	582	.67	.64	.63	.62
1975	653	615	612	609	.69	.65	.64	.64
1976	668	620	618	617	.70	.65	.65	.65
1977	682	637	630	634	.72	.67	.66	.67
1978	706	638	646	651	.74	.67	.67	.68
1979	729	650	636	634	.75	.66	.65	.65
1980	755	664	619	605	.75	.66	.61	.60
1981	779	675	590	558	.75	.65	.57	.53
1982	805	687	569	525	.75	.64	.53	.49
1983	833	700	545	485	.78	.63	.49	.44
1984	883	730	548	478	.76	.63	.47	.41
1985	902	740	559	493	.78	.64	.49	.43
1986	931	758	604	553	.80	.65	.52	.48
1987	963	777	653	618	.83	.67	.56	.53
1988	965	772	646	613	.85	.68	.57	.54
1989	959	760	616	571	.87	.69	.56	.52
1990	951	764	596	560	.88	.71	.55	.52

Source: Alan M. Cartter, Ph.D.'s and the Academic Labor Market (New York: McGraw-Hill Book Co., 1976).

Although the models are highly speculative, they produce a range of estimates which, when considered within the context of historic patterns, seem reasonable (See Table 4.4).

Cartter's projection series do not take into account ethnic-racial differences. Although the use of alternative hypotheses may serve to offset the exclusion of external factors, the assumption that undergraduate enrollment is not significantly impacted by external forces is questionable. In direct opposition to such an assumption is the following statement by NCES:

> "Unlike elementary and secondary schools, where attendance is mandatory for most students, enrollment in institutions of higher education is subject to more variability. The enrollments are affected by economic conditions, political and administrative decisions, the status value of a degree, the intrinsic value of higher education, the cost of an education, etc.[7]

Representative of causal projection methods is the educational adaptation model developed by Dresch. In developing the model, Dresch analyzed changes in the educational characteristics of the labor force, from 1930 to 1970, within the context of change in the interindustry composition of employment and increased representation in industries of the college-educated resulting from increased technological sophistication. Trends in enrollment rates were then interpreted in terms of the demographic profile of the college-age population and changes in the demand for labor. On the basis of these data, a formula was generated to simulate the educational attainments of the adult population (i.e., 25 to 65 year-olds) through the year 2005. Despite the fact that the educational adaptation model was developed for the purpose of forecasting educational attainments through quasi-projecting techniques, Dresch was able to generate statistics, however crude, on the future size of college and university enrollments. Specifically, Dresch projected a 33 percent decline between 1970 and 2000 (See Table 4.6).

Similar to Dresch, Freeman investigated the relationships between (1) economic incentives and college enrollments, (2) the number of bachelor's

graduates in a given year and freshman enrollments 4 to 5 years earlier, and (3) the starting salaries of college graduates and alternative salaries in the economy. The result was a three-equation recursive forecasting system. Although Freeman deliverately avoided the use of detailed statistical language (to accommodate the lay reader), he did make some general statements regarding the future of higher education enrollment. Basically, Freeman suggests an increase in projections through the end of the decade, at which time the overall rate of unemployment will begin to fall. The consequent decline in the status of college graduates in the workforce would be reflected by a similar decline in college enrollment. The resulting drop in college graduates 4 to 5 years later would raise the value of a college degree and precipitate increased enrollments in the mid-to-late 1980's.

Henderson projected change in the participation of 28-year-olds as college freshmen for each state by 1985. Three factors were taken into consideration in making the estimates: (1) regional shifts in the 28-year-old population; (2) the expected enrollment of 18-year-olds at institutions within their home states; and (3) the historical migration patterns of students between states.

Based on Census Bureau data, Henderson projected that there will be 3.6 million 18-year-olds in the U.S. in 1985--600,000 less than the 1975 figure of 4.2 million. However, Henderson's analysis of the trade-offs between migration patterns and population shifts indicate that the impact of the decline will vary from state to state (See Table 4.5). In fact, 12 states are projected to have a larger segment of 28-year-olds in 1985 than in 1975, if general population shifts toward the South and West continue through the next decade (See Exhibit 1).

TABLE 4.5

IMPACT OF PROJECTED POPULATION SHIFTS AND MIGRATION TRENDS OF STUDENTS ON ENROLLMENT OF TRADITIONAL-AGE FRESHMEN: 1973-85

I. Six states are likely to increase the number of 18-year-olds and to serve as net importers of freshman students; this combined effect should increase enrollment.

	Percent of 1975 Enrollment Within Group I		
	Total	Public	Private
Arizona[a], Colorado[a], Delaware[a], Florida[d], Idaho[c], Utah[c]	7.8%	6.0%	5.6%

II. Trade-offs between changes in the projected number of 18-year-olds and migration patterns are not projected to significantly affect freshman enrollment levels in 32 states and the District of Columbia.

Alabama[a], Alaska[c], California[a], District of Columbia[c], Georgia[c], Hawaii[d], Indiana[c], Kansas[a], Louisiana[b], Maine[c], Maryland[d], Massachusetts[c], Michigan[a], Mississippi[a], Missouri[c], Montana[d], Nebraska[c], Nevada[d], New Hampshire[c], New Mexico[d], North Carolina[c], Oklahoma[a], Oregon[a], Rhode Island[c], South Carolina[a], South Dakota[c], Tennessee[c], Texas[a], Virginia[a], Washington[d], West Virginia[a], Wisconsin[a], Wyoming[a]

Percent of 1975 Enrollment Within Group II		
Total	Public	Private
61.5%	63.7%	51.9%

III. The decrease in the number of 18-year-olds should be offset by substantial in-migration of freshman students in one state.

	Percent of 1975 Enrollment Within Group III		
	Total	Public	Private
Vermont[c]	.3%	.2%	.7%

Table 4.5
Continues

IV. The decrease in the number of 18-year-olds is not expected to be offset by the in-migration of freshman students in two states.

	Percent of 1975 Enrollment Within Group IV		
	Total	Public	Private
Iowa[c]			
Kentucky[a]	2.3%	2.2%	3.1%

V. Nine states are likely to experience a decrease in the number of 18-year-olds and also to continue to serve as net exporters of freshman students; this combined effect should decrease enrollment.

	Percent of 1975 Enrollment Within Group V		
	Total	Public	Private
Arkansas[d]			
Connecticut[d]			
Illinois[d]			
Minnesota[d]			
New Jersey[d]	28.4%	25.9%	38.7%
North Dakota[d]			
Ohio[d]			
Pennsylvania[d]			

[a]Most of the freshmen migrating into the state were attending public institutions in 1975.

[b]Freshmen migrating into the state were about evenly split between public and private institutions in 1975.

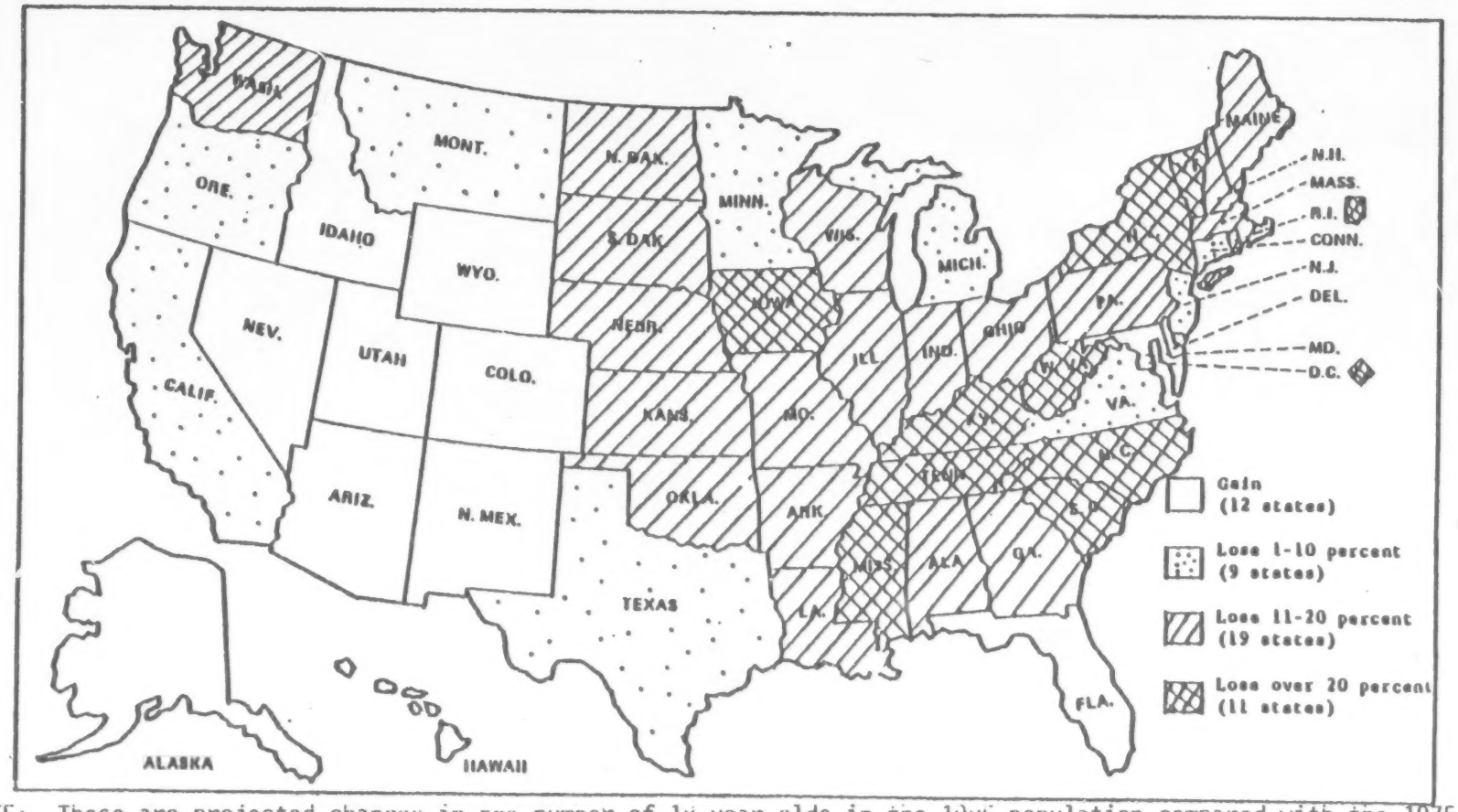
[c]Most of the freshmen migrating into the state were attending private institutions in 1975.

[d]These states have historically served as net exporters of freshman students.

SOURCE: American Council on Education, Change in Enrollments by 1985. Polic-Analysis Service Reports, Vol. 3, No. 1.

EXHIBIT 1

PROJECTED CHANGES IN THE 18-YEAR-OLD POPULATION: 1975-85



NOTE: These are projected changes in the number of 18-year-olds in the 1985 population compared with the 1975 figure. At the national level, there are expected to be 12 percent fewer 18-year-olds in 1985 than in 1975.

SOURCE: American Council on Education, Changes in Enrollments by 1985, Policy Analysis Service Reports, Vol. 3, No. 1.

In summary, the most commonly used approaches to enrollment projections can be classified into four general categories: time-series methods, ratio methods, flow methods, and causal methods. Table 4 presents these enrollment projection models according to their underlying assumptions, statistical techniques and data requirements.

The time-series approach to enrollment forecasting utilizes empirically-based hypotheses relating to historic levels and patterns of enrollment and extrapolates these trends into the future. Thus, the time-series method views future enrollments as a function of time alone, without taking into account any other factors which may influence enrollment levels.

Ratio methods of projecting enrollments express expected future enrollment levels in terms of their parallels in time to some other statistically defined phenomenon--generally, the wider population of a specified age group. To slightly oversimplify, the ratio method projects the proportion of enrollment to college-age population and then applies this projected proportion to estimates of the future size of the age-cohort to obtain projected enrollment.

The flow model approach to enrollment forecasting is advantageous in that it provides a systemwide view of student flow. Using this approach, enrollment projections are made on the basis of past enrollment in the same system. For example, a school system wishing to project 12th grade enrollment for 1980 would use as its base 10th grade enrollment in that same system for 1978.

Causal methods for making enrollment projections, unlike the previous three forecasting approaches, relate enrollment variables to other exogenous variables (e.g., economic, demographic, etc.) in an attempt to identify the causes of projected fluctuations in enrollment.

TABLE 4,6

PROJECTIONS OF PERCENTAGE CHANGES IN COLLEGE-AGE POPULATION AND PREBACCALAUREATE ENROLLMENT, BY DECADE 1970-2000

DECADE	NCES[1] (1971)	NCES[1] (1972)	NCES[1] (1976)	NCES[1] (1977)	CARNEGIE COMMISSION[2] Projection I (1971)	CARNEGIE COMMISSION[2] Projection II (1973)	Ed. Adapt. Model Quasi Projection[3] (Dresch)	Fixed-Coefficients Model, Series C[4] (Cartter)	Population[5] 18-24
1970-80	54.7	43.2	36.1	61.99	48.9	30.6	40.9	23.2	19.2
1980-90	....	....	....	.....	-4.5	-8.6	-45.6	-6.7	-13.9
1990-2000	....	....	....	.....	33.4	26.3	-11.9	3.2	17.8
1970-2000	....	....	....	.....	89.7	50.8	-32.7	19.9	21.0

[1]Total Enrollment, including nondegree, from NCES, 1971, 1972, 1976, and 1977, respectively

[2]Prebaccalaureate, including nondegree credit

[3] Estimates of degree-credit enrollment only, based on projections of numbers of 24-year-olds with baccalaureate degrees in 1974, 1984, . . .

[4]Estimate of FTE, degree-credit enrollment only

[5]Census Series E Project

TABULATION OF GENERAL FORECASTING MODELS

GROUP	SUB-GROUP	MODEL	FORECASTING POSTULATES	PROJECTION TECHNIQUE	DATA REQUIREMENTS
Time-Series Analysis and Projection Methods	Pure Extrapolation		Deterministic trend in last 1,2,3, points. Either arithmetic or geometric.	Extrapolation last 1,2,3, ...etc points with constant, linear, quadratic, etc., interpolating polynomial.	Equally spaced observations on enrollment variables.
	Trend Curve Fitting -polynomial -exponential, log -sigmoidal		Functional forms of trend. Values of fitted parameters.	Graphic or substitutional extrapolation.	
	Simple Smoothing -Moving Average -Exponential Smoothing Auto Regressive				
	Simple Correlative	Fortuitous correlation with indicator variable.			Lengthy enrollment time-series Enrollment and predictor time-series.
Population Ratio Methods	Ratio to eligible population e.g., age participation rates.			Projection of base populations.	Historical eligible population and projection and enrollment time-series.
	Ratio to other indicators, e.g., houses.			Proration by historical ratios.	
	Geographical ratio			Proration matrix multiplication.	
Flow (structural)	Grade/age Conort Survival Ratio		Constant trends in Survival ratios. Estimated moving average regression exponential smoothing		
	Empirical Flow Matrix	Set of mutually exclusive states.		Transofmational matrix multiplication	Aggregate flows (at least 1 yr.)
	Stationary Markov Chain.				Aggregate flows or micro-data.
Causal Methods (employing some economic, demographic, or other theory)	Cross-Sectional Causality, e.g., econometric	Based on some causal theory. Relates enrollment variables to exogenous variables.			
	Systems Dynamics. Simultaneous differential or difference equations. -expected value -stochastic Total System Simulation. geographic, demographic, economic, institutional, etc.				

Although a variety of organizations, agencies and individuals have produced national enrollment projections, several problems arise in making use of the data. Foremost, perhaps, is the accuracy of the data which can only be determined with the passage of time. Most national enrollment projections have a poor record in this regard. For example, Ronald Thompson in 1961 under-projected the 1970 enrollment by 15 percent for his high projection and by 32 percent for his low projection. The actual enrollment fell above the range that had been projected. In the same year, the Census Bureau also under-projected the actual 1970 enrollment by 5 percent for the high projection and by 29 percent for the low projection.[7] As already discussed, a major reason for these inaccuracies is use of the straight-line projection methodology, which merely projects historic trends into the future.

A second problem relates to inconsistency in defining key concepts for terms. This problem presents itself at two levels: the collection and report of data and the use of these data in making projections. An example of the problem at the data collection-reporting stage can be found in the 1970 enrollment reports of the Census Bureau and Office of Education. Differences in the way "student" was defined by the two agencies led to differences in total enrollment reported of about one-half million students.[8] At the projection stage, "postsecondary" enrollment in one study may be limited to enrollments in colleges and universities; in another, it may include vocational, technical and trade school enrollments. Thus, use of inconsistently applied definitions and terms exacerbates an already complex situation.

A third problem in using national enrollment projections is the difficulty involved in comparing data from different sources. Table 4.1, which presents percentage changes in pre-baccalaureate enrollment as projected by various agencies/organization/individuals, is illustrative of this point. At first

glance, one would wonder at the seemingly large discrepancies in projections. However, a closer examination of explanatory notes indicates concentration on different variables. For instance, some of the forecasts project total enrollment while others project full-time equivalent enrollment; some, degree-credit enrollment and others, both degree-and nondegree-credit enrollment.

FOOTNOTES

1. Richard Berendzen, "Population Changes and Higher Education," Educational Record 55 (Spring, 1974), pp. 116-117.

2. Carnegie Commission on Higher Education, Priorities for Action: Final Report of the CCHE (New York: McGraw-Hill Book Company, 1973), p. 77.

3. Carnegie Foundation for the Advancement of Teaching. More Than Survival (Washington: Jossey-Bass Publishers, 1975), p. 77.

4. Ibid., pp. 44-45.

5. David S. Spence, A Profile of Higher Education in the South in 1985 Southern Regional Education Board (Atlanta, Georgia), 1977.

6. National Center for Education Statistics, Projections of Education Statistics to 1985-1986, Washington, D. C.: Government Printing Office, 1977, p. 1.

7. Cited in John K. Folger, "On Enrollment Projections: Clearing Up the Crystal Ball," Journal of Higher Education 45 June, 1974, p. 406.

8. Ibid.

CHAPTER 5

RESULTS

This section presents an analysis of the projected population and enrollment trends for the States of Georgia and Virginia. The ideal enrollments include both full-time and part-time students and address both public and private institutions. The selected actual enrollment data are restricted to full-time enrollment only. A few facts about the higher education system of each state are provided as an introduction to these analyses.

The University System of Georgia includes four universities: 12 senior colleges and 16 junior colleges. Three of Georgia's state colleges are black: Fort Valley State College, Albany State College and Savannah State College.

The public higher education system of Georgia is governed by a single body--The Board of Regents. This board--which consists of 10 members from congressional districts and five at large members--is responsible for, as indicated by Haynes, "developing and implementing the state's" desegregation plan. Generally, the Board has "statuatory responsibility for higher education planning and for the consideration of institutional budget review,' including employment policy, program development, and alignment and line acquisition.

In 1976, 30,965 (18.3 percent of total enrollment) blacks were enrolled in higher education in the state of Georgia, nearly half of which were enrolled in predominantly white institutions (8.0 percent).[1] In comparison, blacks constituted 26.1 percent of the total population of the state in 1975, and 31.3 percent of the 18-to-24 age-cohort in 1976.[2] In terms of output, 2,310 of the 16,791 baccalaureates produced in the state of Georgia in 1975-1976 were black.[3]

Virginia has 39 state-supported institutions: 15 senior colleges, 23 community colleges and one liberal arts college. Two of Virginia's senior colleges are black: Norfolk State College and Virginia State College.

The public institutions of Virginia are governed by separate and independent governing boards referred to as Boards of Visitors. All but one of the four-year colleges have separate governing boards. All two-year institutions are governed by a single board--the State Board of Community Colleges. In 1956, the State Legislature created the State Council of Higher Education, which has coordinating responsibility but not authority.

In Virginia, 35,841 blacks (14.7 percent of the total number of students) were enrolled in higher education in 1976, of which nearly half (19,523) were enrolled in predominantly white institutions (6.7 percent of blacks in higher education in the state).[4] Demographically, blacks made up 18.7 percent of the total population and 15.6 percent of the 18-to-24 age-cohort of the state in 1976.[5] Of the 20,069 baccalaureates produced in the state in 1975-1976, only 3,501 were black.[6]

GEORGIA

Population Trends and Projections

As Figure 2 indicates, there has been a steady increase in the total population of Georgia from about 3.4 million in 1950 to 4.9 million in 1975. Moreover, according to the Census Bureau's Series II projections,* this trend is expected to continue at a fairly steady rate until 2000, reaching approximately 6.8 million by that time. The black population has shown, and is expected to continue to show in the year 2000, an increase in absolute numbers, although the increase has been and is expected to continue to be slower than that for the total population. Since the "other" (that is, those minorities or all races which are not included in the black or white categories) population for Georgia is less than one percent of the total population, it can be expected that the white population will account

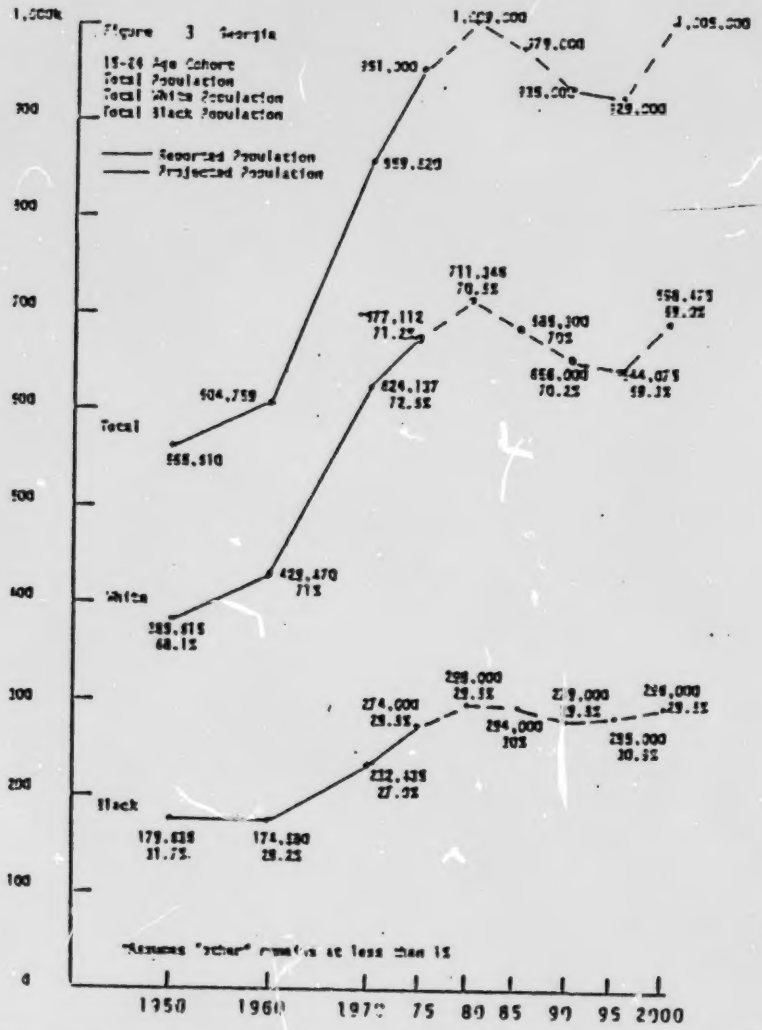
*Series P-25, No. 704, assumes that fertility values will move toward 2.1 births per woman, mortality rates will moderately decline, and net migration will continue at 400,000 per year.

for most of the increase. As a result of these trends, the percentage of representation of the black population in Georgia has decreased from 30.9 percent in 1950 to 26.1 percent in 1975, and is expected to continue to remain at approximately the same percent through the year 2000. This corresponds with the national percentage distribution of the black population in 1950 (10.0 percent) and the projected percentage distribution for the year 2000 (Series II).

If the 15-to-24 age-cohort is used as an indicator of the size and composition of the college-age population in Georgia, the trends are by no means as linear as for the total population (Figure 3). The size of the 15-to-24 age-cohort (1) increased from over a half million in 1950 to 951,000 in 1975, (2) is expected to increase to slightly over one million in 1980 and (3) shows a decline to about 930,000 between 1990 and 1995 and an increase again to over 1 million in 2000. These trends are consistent with those projected nationally for the 18-to-24 age-cohort. Henderson projects that the 18-to-24 age-cohort will decline from 1980 through 1990, with the highest drop (11 percent) to occur between 1985 and 1990. On the contrary, Henderson projects a steady increase in the number of blacks in the 18-to-24 age-cohort from 1975 (14.2) through 1995 (19.3).

Both the white and black components of the population of Georgia show somewhat comparable trends; however, changes in the slope of the projected curve for blacks do not show as dramatic a dip or recovery as for the total or white population. It is important to note that the percentage distribution of the black population in this age-cohort was 31.7 percent in 1950 and is projected to remain close to this ratio to the year 2000. In contrast, the percentage distribution of the total white population for all ages declined in 1975, and is expected to remain within

SOURCE: See Appendix A.



SOURCE: See Appendix A. The data for whites in this figure are interpolated based on an "other" population of less than 1 percent.

a point or less of this figure until 2000.

Enrollment Projections and Historical Enrollment and Output Trends

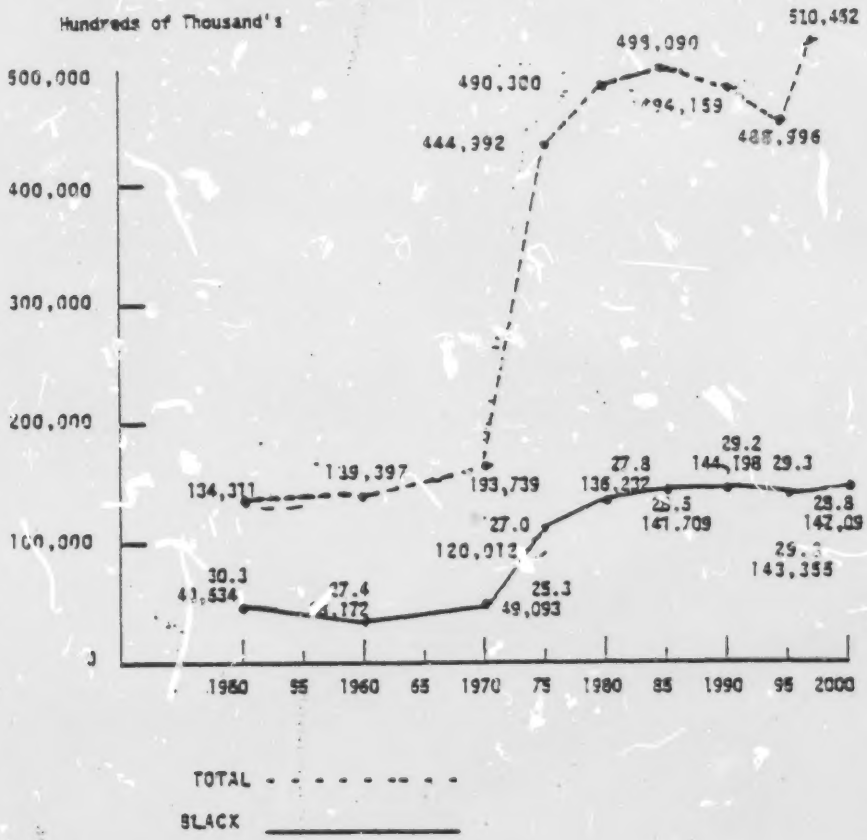
Figure 4 depicts the projected total enrollments (inclusive of full-time and part-time categories) for the state of Georgia by total and black enrollments for the years 1950 through 2000. These projections represent ideal enrollments based solely on historical (1950 to 1970) and projected (1975 to 2000) changes in the size of the 15-to-24 age-cohort.

It is projected that total enrollment in the state of Georgia would increase approximately 400 percent between 1950 and the year 2000 (376,141), with the sharpest increase in enrollment projected to occur between 1970 and 1975 (251,253 or 130 percent). Similar to the projections of the Southern Regional Education Board (which uses the 18-to-24 age-cohort), an increase of 10.8 percent is projected between 1975 and 1980. Although the Southern Regional Education Board projects stability in total enrollment for the state of Georgia between 1980 and 1985 and the National Center for Educational Statistics projects a decline of almost a half million students nationally, a small increase of 1.6 percent (1990) is projected, based on the data in Figure 4. This is consistent with the Carnegie Council's projection of an increase of more than a half million students nationally (624,000) between 1980 and 1985.

Similar to the projected total enrollment, it is projected that black total enrollment would spiral upwardly between 1970 and 1975 (70,919 or 150 percent). However, unlike the projection for total enrollment, the black total enrollment in absolute numbers is projected to increase steadily between 1970 and 1995 (94,262 or approximately 300 percent). The 917 percent increase (11,697) in black enrollment projected between 1975 and 1985 approximates the 9.3 percent increase projected in the 18-to-24 age-cohort nationally by the Bureau of the Census.

Figure 4

Projected Enrollment of the State of Georgia By Total and Black Enrollment, 1950 through 2000



SOURCE: The age-specific enrollment method of the National Center for Educational Statistics (low alternative) was applied to the 15-to-24 age-cohort of the state of Georgia to project the above enrollments. See Martin M. Frankel, Projections of Education Statistics to 1986-87 (Washington, D.C.: NCES, 1978), pp. 10-12.

The patterns of percentage distribution of the projected enrollments for blacks and nonblacks (of which whites constitute 99 percent or more). show significant differences. Projected total enrollments for blacks tend to approximate 30 percent throughout the 50 year time span, with a steady increase in percentage distribution between 1975 and 1995 (4.0 percent). Further, the distribution of blacks is projected to reach a steady state between 1975-1980 and 1990-1995, while the projected distribution of white enrollment is estimated to decline from 73.7 percent in 1970 to 70.7 percent in 1995, and to climb upwardly by five percent between 1995 and the year 2000. Declines of 0.1 and 0.5 percent, respectively, are projected in terms of percentage distribution for the years 1990-1995 and 1995-2000 (Figure 5).

Chart 1 illustrates the actual full-time enrollments for the state of Georgia for selected years. As can be seen, the actual full-time black and total enrollments for the years 1970 and 1976 were far lower than similar projected enrollments for the years 1970 and 1975--both in terms of absolute numbers and percentage distribution.* Additionally, the actual increases in total and black enrollments between 1970 and 1976 were less dramatic than projected increases.

The percentage distribution of full-time black enrollments in the state for the years 1970 and 1976 was 16.3 percent and 18.2 percent, respectively, whereas the projected distribution of full-time blacks for these years was 25.0 percent and 26.0 percent, respectively--a disparity of 3.7

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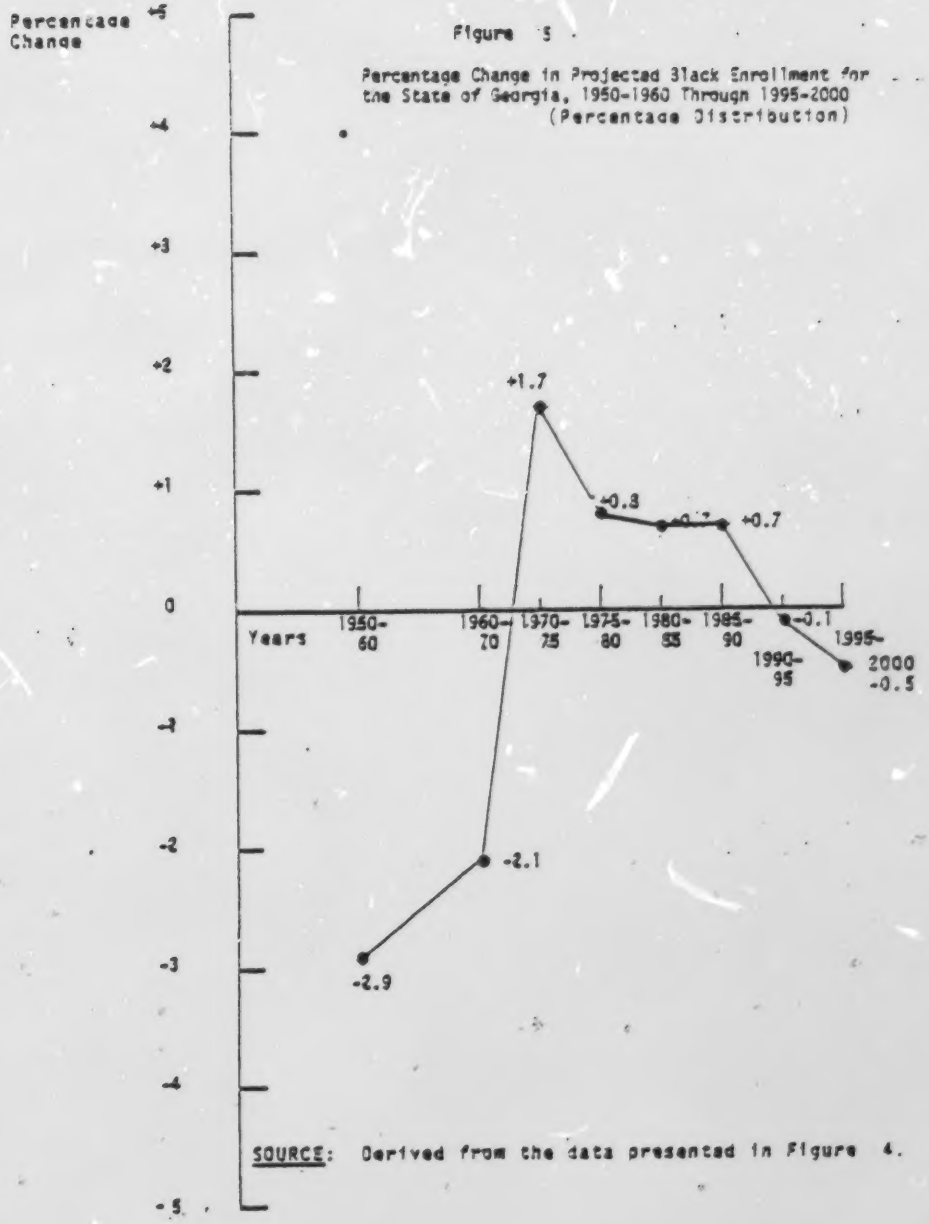
* The projected enrollments include both part-time and full-time students. If part-time enrollment is excluded, the ideal enrollment figures for the years 1970 and 1975 are 24,722 and 60,678, respectively. The total full-time projected enrollment for these years is 97,975 and 226,316, respectively.

Figure 5

Percentage Change in Projected Black Enrollment for the State of Georgia, 1950-1960 Through 1995-2000 (Percentage Distribution)



SOURCE: Derived from the data presented in Figure 4.

CHART 2

Full-Time Enrollments of Georgia and Virginia For Selected Years, by Total and Black Enrollments

YEAR	GEORGIA Total	GEORGIA Black	GEORGIA Black %	VIRGINIA Total	VIRGINIA Black	VIRGINIA Black %
1970	91,405	14,857	16.3	103,183	12,484	12.1
1976	158,747	28,960	18.2	174,529	27,567	15.8
% Change 1970-1976	73.6 (67,342)	94.9 (14,103)	1.9	69.1 (71,346)	121.7 (15,113)	3.7

SOURCE: Office for Civil Rights

*It is estimated that the "other" category represents less than 1 percent of the non-black enrollment. Full-time enrollment includes undergraduate and non-undergraduate categories.

and 7.8 percent, respectively. In absolute numbers, the actual full-time enrollments of blacks in higher education in the state nearly doubled between 1970 and 1976. Nevertheless, it is clear from the available historical enrollment data that the state of Georgia has not fully exploited the opportunity for expanding the participation rates of either blacks or whites.

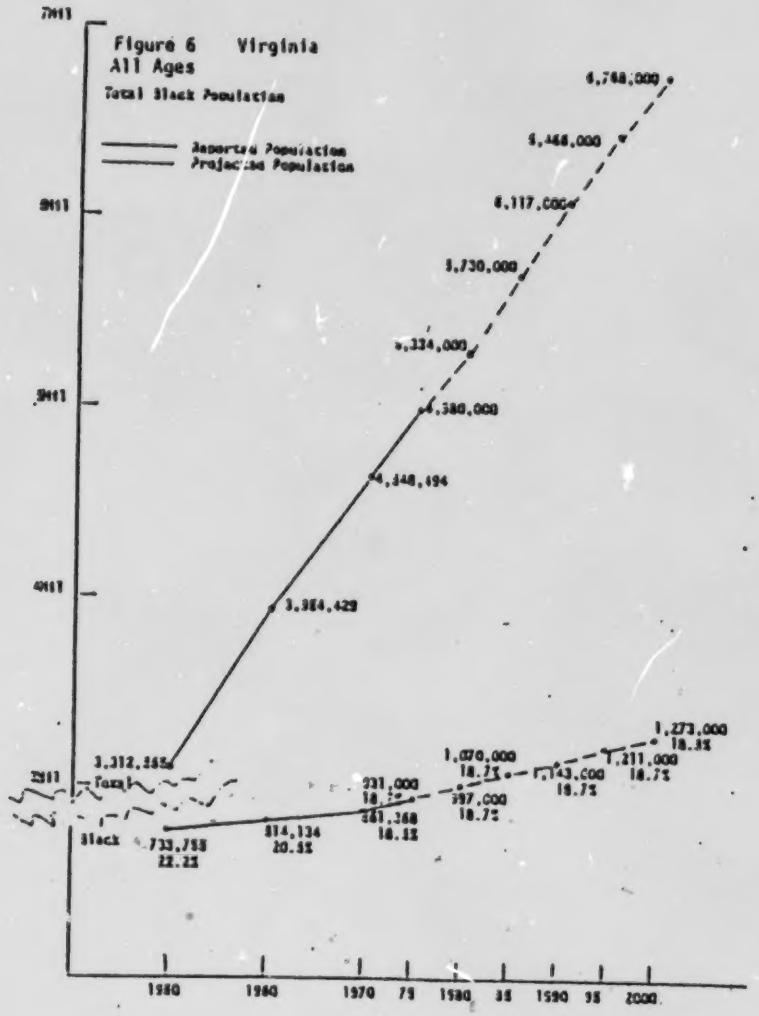
A number of factors probably contribute to the disparity between ideal and actual enrollments of blacks. A major factor is that the projections reflect changes in the 15-to-24 age-cohort which includes a larger number of persons 15-and 16-year-olds normally represented in postsecondary education enrollment. A second major factor which will contribute to continuing disparity between the projections and actual

enrollments in general is the drop-out rates of blacks. In 1970, 20.2 percent of the non-black 16-17 year-olds were not enrolled in school compared to 17.1 percent of whites in the same age category.[7] As recent as March 1977, according to the Bureau of the Census, the median years of school completed by blacks 14 years and older was 10.4; while 34.5 percent had completed four years of high school or more; 11.5 percent, one year of college; and 6.3 percent, four years of college or more.[8] In comparison, 59.3 percent of the whites had completed four or more years of high school; 28.9 percent, one or more years of college; and 14.5 percent, four or more years of college. The median years of school completed by whites fourteen years old and over was 12.3.[9]

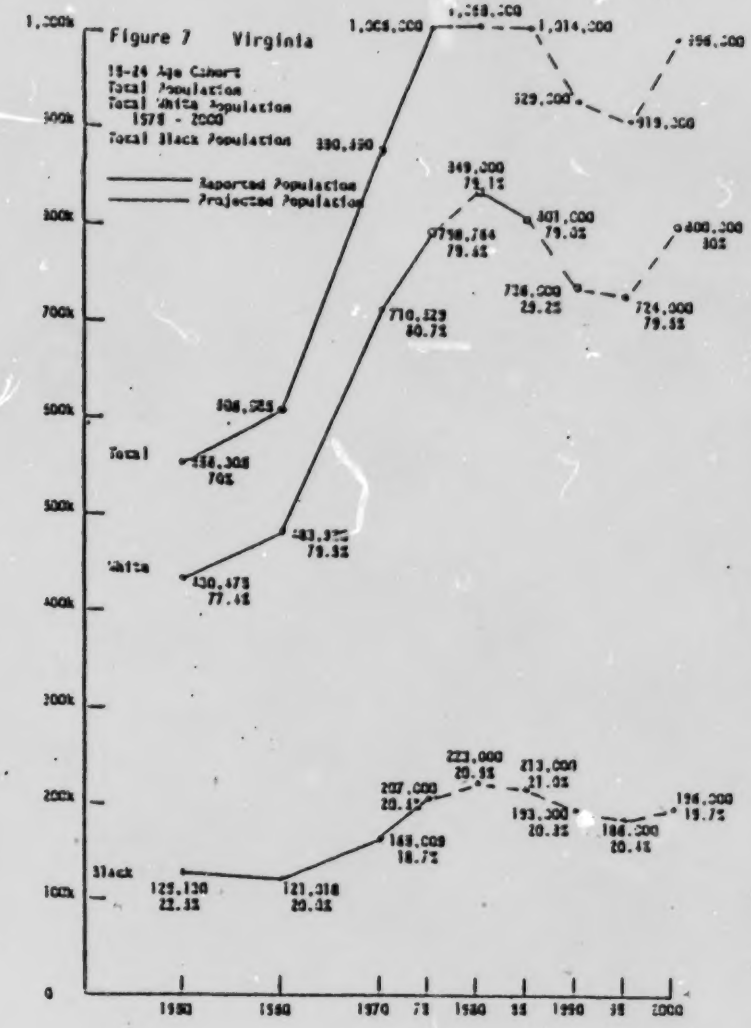
Virginia

Figure 6 summarizes population trends in the state of Virginia. Similar to Georgia, total population trends for Virginia show a steep and almost linear increase throughout the entire time period. In 1950 the total population of Virginia was about 3.3 million, in 1975 about 5.0 million. The total population is projected to increase to about 6.8 million by 2000. Blacks also show a steady increase from 773,775 in 1950 to 1.3 million projected in 2000. Black representation in the total population, however, shows a decline from 22.2 percent in 1950 to 18.7 percent in 1975, and a projected steady proportion of about 18.7 percent through the year 2000.

The 15-to-24 age-cohort shows the same rapid increase as for the other states in the total numbers in this group from 1960 to 1975, and then a decline during the 1985 to 1995 time period and a return to the 1975 level by 2000 (Figure 7). It is projected that the size of the black



SOURCE: See Appendix A.



SOURCE: See Appendix A. The data for whites in this chart are interpolated, based on an "other" population of less than 1 percent.

15-to-24 age-cohort will increase by 0.4 percent between 1975 and 1985 as opposed to a concomitant 0.6 percent drop for whites in the same age-cohort. The decline in the white cohort, though slight, is consistent with the projected decline in 18-year olds and the 18-to-24 age-cohort nationally from 1975 to 1985. As in the national projections for blacks in the 18-to-24 age group, it is projected that the size of the black 15-to-24 age-cohort will decrease between 1985 and 1995, although not as dramatically.

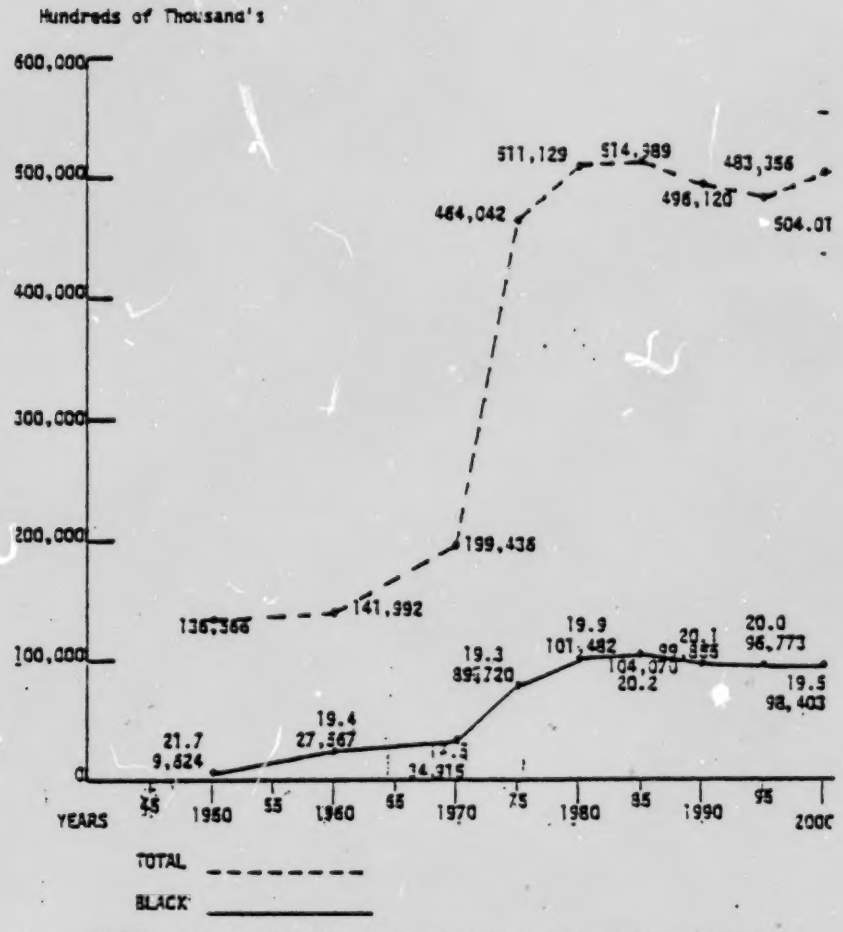
Enrollment Projections and Historical Enrollment and Output Trends

The projected pattern in total and black full-time enrollments for the states of Georgia and Virginia tend to be somewhat similar also (Figure 8). The total enrollment of the state of Virginia is projected to increase 300 percent in absolute numbers between 1950 and 1985. Consistent with the projections for the state of Georgia, the sharpest increase in absolute numbers is projected to occur between 1970 and 1975 (133 percent). Total enrollment is projected to decline by 6.5 percent between 1985 and 1995 (31,633), while an upswing of 4.3 percent is projected for the period 1995 to 2000.

Total black enrollment is projected to increase 351 percent between 1950 and 1985 (74,446), with the sharpest increase occurring again between 1970 and 1975 (264,606). The projected percentage distribution of total black enrollment in the state declines from 21.7 percent in 1950 to 17.5 percent in 1970. After 1970, the projected distribution of blacks climbs from 19.3 percent (89,720) in 1975 to 20.2 percent (104,070) in 1985, and tends to reach a steady state between 1985 and 1995, although minimal declines occur during the same time period. By the year 2000,

Figure 8

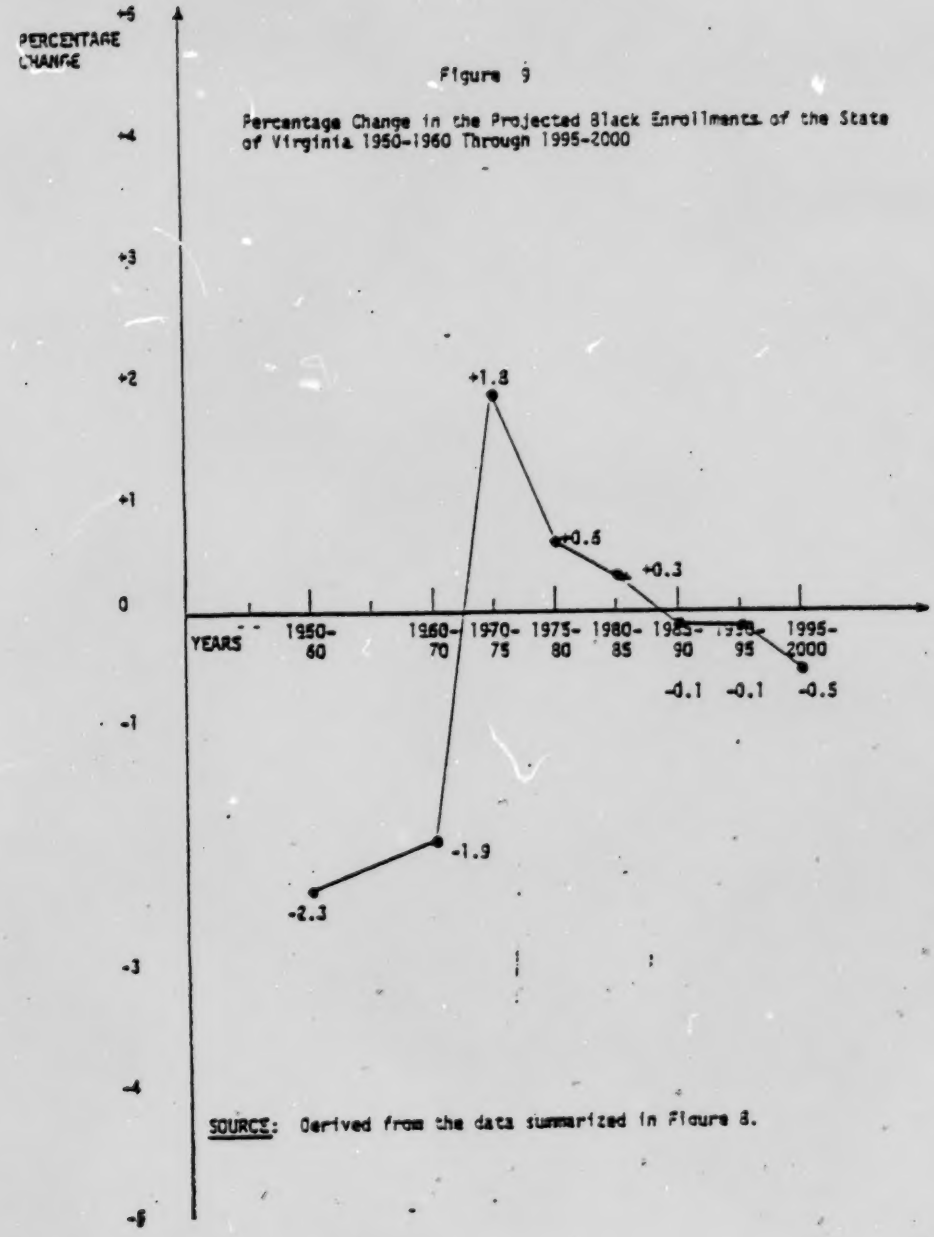
Projected Enrollment of the State of Virginia By Total, and Black Enrollments, 1950 Through 2000



SOURCE: The age-specific enrollment method of the National Center for Educational Statistics (low alternative) was applied to the 15-to-24 age-cohort of the state of Virginia to project the above enrollments. See Martin M. Frankel, Projections of Educational Statistics to 1986-87 (Washington, D.C.: NCES, 1978), pp. 10-12.

Figure 9

Percentage Change in the Projected Black Enrollments of the State of Virginia 1950-1960 Through 1995-2000



SOURCE: Derived from the data summarized in Figure 8.

the projected percentage distribution of blacks in the state (19.5 percent) tends to approximate the 1975 level (19.3 percent). The estimated percentage distribution of whites is projected to decline from 81.5 percent in 1970 to 78.8 percent in 1985, and to reach the 1960 level (79.6 percent) by the year 2000. Between the years 1985-1990 and 1995-2000, the estimated distribution of the black enrollment declines by 0.4 percent (Figure 9).

If the actual black enrollments of the state of Virginia for 1970 and 1976 are compared to the ideal total and total black enrollments for 1970 and 1976, it is clear, again, that the ideal enrollments are significantly larger than the actual enrollments. Total black enrollments (ideal vs. actual) differ by 41.0 percent (5144 students)* for the year 1970, and by more than 64.0 percent (17,859 students) for the year 1976. Nevertheless, actual total black enrollments more than doubled between 1970 and 1976. Despite the limitations of these data, it is safe to conjecture that the actual enrollments of the state of Virginia for the two selected years do not reflect the growing size of the 15-to-24 age-cohort--the college-age group for this study.

As for the state of Georgia, an examination of selected output trends suggests some of the reasons for the disparity between actual and ideal enrollments, although here again, the projections reflect changes in demographic trends to a significantly larger extent than actual enrollments. The median years of school completed by blacks 14 years of age and older in the state of Virginia was 10.4 percent in March 1977 as contrasted to 12.4 percent for whites of the same age. Further, according to the Children's Defense Fund, 15.6 percent of the non-white 16-17 year-olds as compared to 11.7 percent of white children of the same age were not enrolled in school in 1970. In terms of high school and college completion rates, 37.0 percent of blacks 14 years old and older had

* Projected full-time rather than projected total black enrollment is used in this comparison again for the sake of consistency.

completed four years or more of high school compared to 64.0 percent for whites; and 5.2 percent, four or more years of college compared to 16.4 percent of whites. Additionally, blacks earned only 12.5 (2501) percent of the total number of bachelor's degrees earned in 1975-76 in the state of Virginia. Hence, it appears that white output in the state of Virginia tended to be double or more than double that of blacks in general.

DISCUSSION

The study was primarily designed to: (1) generate a series of enrollment projections for ten selected states which reflect a sensitivity to the broad array of demographic, economic, legal, social, educational and political factors which impact the numbers of blacks who enter and compete successfully at the college level, including the graduate and professional levels; and (2) analyze the resulting projections for selected states. It was thought that such data were needed to ensure that implementation of equitable policies for the desegregation of higher education enrollments in the Adams states. Because of cost constraints and limitations of the data, a decision was made to use an existing projection model which relied heavily on demographic trends as determinants of enrollment rates.

In summary, the total and total black enrollment projections for the two states tend to be consistent, although slight differences are noted. In terms of absolute numbers, the total enrollments projected for the state of Georgia tend to show increases between 1970 and 1985, decreases between 1985 and 1995, and an upward swing between 1995 and the year 2000. The projected total enrollment for the state of Virginia tends to follow the same pattern, but shows increases between 1950 and 1980, smaller decreases between 1985 and 1995, and a smaller increase between 1995 and the year 2000. The projected trends for 1975 to 1985 seem to fall below national trend projected by NCES for the years 1976-1986.

NCES projects a 17 percent increase in total enrollment between 1976 and 1986, while the projection data for Georgia and Virginia show an increase of 11 percent and 10 percent, respectively.

The percentage distribution of the projected total black enrollment for the state of Georgia declines the first three time points, continues to increase through 1995 and dips somewhat between 1995 and the year 2000. In each case it appears that the decline in black enrollments is slower and less dramatic than the decline in the non-black enrollment. These projections reflect the national trends projected for the black 18-to-24 age-cohort, although both the observed increases and decreases tend to be smaller. These state trends also reflect the trends projected by the Southern Regional Education Board (SREB). The SREB projects increases in the enrollments of Georgia and Virginia between 1975 and 1980 and stability between 1980 and 1985.

It is important to comment here on projected trends in the size of the 18-24 age-cohort. It is projected that the 15-to-24 age-cohort of the state of Georgia will increase dramatically through 1980, decrease significantly between 1980 and 1995, and climb again between 1995 and the year 2000. A slightly different pattern is observed for the state of Virginia. The 15-to-24 age-cohort of this state is projected to increase sharply between 1950 and 1995, and increase significantly between 1995 and the year 2000. If these patterns in cohort projections are juxtaposed against the projected patterns in the 18-to-24 age-cohort, a similarity is clearly noted. Generally, the major differences, as indicated previously in this study, tend to be related to the size of the increases or decreases, since the younger age structure of the black population allows for sizeable numbers of 15- and 16-year-olds to be included in the 15-to-24 age-cohort. This becomes problemmatic, considering the small number of students generally who graduate from high school at 15 or 16 years of age.

The enrollments projected in this study tend to be inconsistent with the enrollment goals included by the states of Georgia and Virginia in their statewide desegregation plan, despite inherent differences in the measurement units utilized. The state of Georgia does not apply its sophistication regarding the projection of enrollments to the development of projections by race which incorporate sensitivities regarding demographic and other important factors. The desegregation of student enrollment in the state of Virginia is tantamount to equalizing the proportion of black graduating seniors which enter postsecondary education. The Virginia plan does not address the larger number of blacks lost prior to the senior year because of economic, social, educational and political constraints or the number of black seniors required to equalize output or projected demographic changes in the 18-to-24 age-cohort for blacks (or whites). Further, the measure of equality and (i.e., the proportion of white graduating seniors entering postsecondary education) guarantees both inequality and inequity because of the failure of the state to fully tap the white availability pool.

Clearly, the lack of the use of common statistical definitions and measurement units by national data collectors reduced the potential accuracy and reliability of the enrollment projections. Similarly, the unavailability of standard longitudinal enrollment data complicated the projection attempts and analyses.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

The major purpose of this study was to: (1) project the higher education enrollments of 10 selected states--six Adams and four non-Adams--by race and (2) analyze the findings, both historical and projected, for selected states within the context of factors critical to equal access for blacks, especially as addressed by the Adams mandate. It was hoped that the results of the study would prove useful to statewide planners of public higher education as they map out future strategies for equalizing educational opportunities in their state.

Because of its developmental and exploratory nature, this study generated more questions and recommendations than solutions. Despite the changing nature of higher education, the enrollment projections represent a first step in the development of sound planning tools for policymakers in the ten selected states. If educational equality and equity are to be achieved, the enrollment targets set by the affected states in response to the Adams order should be based on observable and projected trends in the college-going cohorts of blacks and whites. Although the projections are based solely on demographic trends and shifts in the age distribution of college-going groups, they pose norms by sex, attendance and type of institution that the states can aim toward within the context of the current and future cost, socio-political and educational constraints of their state. Hence, the projections facilitate the introduction of further objectivity and rational thinking into the desegregation planning processes of such states and the two states wrestling with the issue of desegregation outside of the Adams mandate (Pennsylvania and Tennessee). Further, the projections afford all ten states the opportunity to examine, to the extent possible, the

actual enrollments of their state against the norms for the period 1950 through 1980, with an eye toward identifying the gaps for both whites and blacks along several dimensions.

The difficulties experienced in producing the enrollment projections further documented the limited availability of reliable longitudinal racial statistics at both the federal and state levels although national data collectors proved to be the most reliable sources of data. Data derived from federal and state agency reports often lack comparability because of variations in the population covered, the definitions employed, the methodologies used, the statistics used, the years covered and the accuracy and completeness of reporting. Six of the ten states (Alabama, North Carolina, South Carolina, Tennessee, Georgia and Virginia) had population projections available, but for varying years. For example, the state of North Carolina published a comprehensive report on population trends and projections by age, race, and sex for 1960 and 1970, for individual years 1975 through 1985 and for 1990. The population projections of the state of South Carolina were limited to the years 1975, 1980 and 1985; the state of Georgia to 1980. Although the state of Texas had not published population projections by race and sex, projections were available by age for the years 1979 to 1983. The state of Florida only had population estimates available by age, race and sex for the year 1976.

The collection of educational data was even more problemmatic, since the state educational agencies of these states appeared to focus more on grades K through 12 than postsecondary education statistics. Little or no postsecondary education data were available for the states of Alabama, Texas, Tennessee, Maryland, Pennsylvania and Virginia. The data available for the states of North Carolina, South Carolina and Florida varied by years as well as by type (e.g., the availability of attainment and attrition data as opposed to enrollment data).

The inconsistency and incomparability of the racial statistics available at the federal level further underscored the limitations of the Office for Civil Rights (OCR), Department of Health, Education and Welfare, in detecting discriminatory patterns practiced by colleges and universities in receipt of federal dollars. The OCR's chief source of data for identifying institutions not in compliance with the Civil Rights Act of 1964 and the recent Adams order is its biennial collection of enrollment and attainment data by sex and race in conjunction with the National Center for Education statistics. Four obvious limitations of OCR's data collection system regarding enrollment were noted: (1) all institutions were not required to report their racial enrollments; (2) the survey was limited to full-time students, despite the tremendous bulge in part-time enrollments which has occurred during recent years; major shifts had occurred in the definition of racial groups since 1968, the year that the first enrollment data were published; and (4) evidence of noncompliance in areas such as recruitment, admissions policies, student financial aid and other support services was not collected. However, these limitations appeared to have reflected a broader problem: the inability of OCR to define what it meant by discriminatory educational practices within the context of appropriate data and statistical indices.

The validity of the analysis of ideal vs. actual enrollment and output trends of the two selected states was confounded by the aforementioned methodological problems and lack of data in many instances. Nevertheless, the analyses bore out three critical concerns which stimulated the conduct of this study:

- The enrollment-related desegregation policies of the two states as defined in their statewide plan militated against the equitable delivery of services to both blacks and whites.

- The enrollment targets related to blacks specifically were based on a narrow conceptualization of the factors which determine student enrollment generally and black enrollment in particular.

- The unavailability of reliable longitudinal racial statistics at the state level operated as a major impediment to the implementation of equal educational opportunity as defined by the Civil Rights Act of 1964 and the Adams mandate.

That DHEW approved the statewide plan of these two states is symptomatic of the larger reporting problems existent at the federal level. It would appear that the fight for the equitable desegregation of public higher education in the Adams states will be fortuitous at best unless serious thought is given to the definitional and data requirements essential to the implementation of a standardized reporting system which gets at pre-defined discriminatory patterns at both the federal and state levels.

RECOMMENDATIONS

The findings of this study, though preliminary at best, constitute a much needed foundation for continuing the search for planning tools and indices which can be used in defining equality of educational opportunity as related to the desegregation of public higher education. Specific works which can be generated from the study and its data bases (soft and computerized) in their current state of development include:

- A detailed analysis of statewide reporting systems related to the desegregation of higher education;
- An analysis of the population and enrollment projections for eight selected states by race, sex, type of institution and attendance status, 1980 to 2000;
- A comparative analysis of the population and enrollment projections of selected Adams and non-Adams states, 1980 to 2000; and
- A detailed analysis of the reporting system of the Office for Civil Rights as related to the Adams mandate.

Clearly a number of other studies need to be done to enrich and build on the findings presented here. Such studies include:

- A study of comprehensive formulas for projecting the enrollments of the six Adams states by race, sex, attendance status and type of institution;

- A detailed comparative analysis of the ideal and actual enrollments of the six Adams states, by race;
- A study of indices for identifying discriminatory patterns in higher education as practiced by the Adams states; and
- A comparative analysis of the enrollment goals as defined by the statewide plans of the Adams states and the enrollment projections.

Since the 15-to-24 age-cohort was used in this study in producing enrollment projections, it is recommended that analyses also be conducted to determine the amount of error involved in using this cohort. It is also recommended that the new projections be produced using the 18-to-24 age-cohort, the traditional college-going age group. It would also be worthwhile to test use of the 20-to-24 age-cohort because of the growing numbers of older students attending college.

To increase the utility of such projections as planning tools, it is further recommended that the projections address enrollment by undergraduate, graduate and professional categories as well as by predominantly white and black institutions. Further, projection of earned degrees by race based on assumptions made regarding the access and persistence rates of blacks prior to and during the college experience would clearly broaden the access of state and federal educational policymakers to sound planning and analytical supports.

APPENDIX A

METHODS

APPENDIX A

Methods

This chapter describes the concepts and methods which were employed in this study to determine the factors which influence the flow of students through the educational system. Methods which were used to project degree-credit enrollment by race and other selected factors, as well as to analyze these resulting projections are explained. The concepts describe two types of sequentially-related methods and the classes required by these models:

- A flow model of potential educational progression, which classifies the population by geographical region, time period--both past and projected age cohorts--and demographics (including race and sex). The model permits the tracing of the population from birth through primary and secondary school levels, undergraduate and graduate school levels, and the many branches and pathways any given individual may follow in this progression. The model also provides the framework with which (1) the classes of data required by the models can be identified, (2) defined measurement units for data in each of the classes can be specified, and (3) relationships among the classes of data in terms of their use as criteria and predictor or indicator variables for predicting equal opportunity can be formulated.

- A matrix model which simply provides a systemmatic means for identifying arrays and tabulations of the data specified by the flow model which will permit their comparison in terms of status and trends. This model is the means by which the tables in Chapter 6 have been generated.

The major objectives and constraints which have guided the development of these models and their data bases need to be made explicit at this point. Both quantitative and qualitative bases for examining equal opportunity and assessment have been addressed in this study. While the statistical bases provide a necessary foundation, they did not provide a sufficient foundation

to, in fact, bring about parity. Economic, legal, educational, social and other factors, and intervention strategies also must be considered in policy-making, planning and program implementation to achieve parity. (See Chapter 3). While this study provided descriptive data of past and present status and trends in population, enrollments, and attainment, its focus was on the development of projections which can support desegregation policy-making and planning, specifically for state planners in the desegregation of the state-controlled institutions of higher education.

The models and their data bases sought to test the extent to which data could, in fact, be collected to fulfill the requirements of the models. No attempts (such as surveys) were made to collect data directly from the subpopulations under consideration. Rather, the efforts were concentrated on secondary sources, such as the U. S. Bureau of the Census, the Office of Civil Rights, state sources, and others. This led to a second type of data-testing: the extent to which the data from various sources were expressed in comparable units and/or the extent to which they could be transformed into comparable units.

The methods describe:

- The approach taken in the development of the models and specification of data-base requirements.
- The identification of sources of data and methods employed to collect data from these sources. Particular attention as indicated, was given to the extent to which the data specified by the models could, in fact, be obtained; and further, the extent to which they were expressed in, or could be transformed into comparable units.

Conceptual Framework

Figure 3.1 illustrates the flow model of potential education progression

developed in this study. Each of the components, identified by the circled numbers (e.g., "4"), is described in terms of definitions of each of the classes of data, and the measurement units for each class of data.

Beginning on the left side of the model, the first sets of components represent categories in which all data within the flow portion of the model were properly classified.

The first category is in terms of geographical region Number 1, on a state-by-state basis. The choice of the ten states included in this study was primarily dictated by two factors: (1) the Adams litigation; and (2) the constraints of the ISE data base on black colleges served by the Thirteen College Curriculum Porgram (TCCP), a developmental education effort launched by the Institute in 1967. Six of the states were among the ten states cited in the Adams vs Richardson case as in violation of the Civil Rights Act of 1964: Florida, Georgia, Maryland, North Carolina, Pennsylvania and Virginia. The remaining four states -- Alabama, Texas, Tennessee, and South Carolina -- are states which contain not only a number of black colleges served by the TCCP, but also a significant number of black colleges in general.

The ten selected states were believed to be sufficient for purposes of this study to demonstrate the range and variability in statistical status and trends of the sub-populations under consideration. Also indicated in the model is the possibility for the scope of the study to include data on the additional states, and on the nation as well. National data could provide a benchmark against which each individual state may be compared and contrasted with national figures.

Number 2 indicates time periods. The model indicates, for the most part, five-year increments from a 1950 historical baseline to a 2000 pro-

jected time. However, two-year increments are indicated from 1968 to 1976 since this was a period of rapid increase in enrollment of blacks in higher educational institutions, and since this is not likely to indicate a stable trend.[1]

Because of practices employed in the collection of census data it may not always be practical (or necessary) to use five-year increments to describe or predict trends. If population, enrollment, and attainment status and trends remain relatively stable over a long time period, then ten-year increments may be sufficient. However, if there are factors which cause sharp positive or negative inflections in these curves, then five-year--or even shorter--time intervals may be required for making accurate projections,[2] Moreover, most planning, including that which is done by educational institutions, requires more data points for accuracy than 10-year increments may provide--again, especially, if the long-term trends are not stable.

With respect to the time span considered--1950 to 2000--this represents a period in which those born in the 1950's will have exceeded already, for the most part, the college-going age by the time the year 2000 is reached. Moreover, there were few changes in the college-going trends of blacks before 1950.[3]

Number 3 indicates that the populations, enrollment, and attainment data may be grouped for persons of various age cohorts--ranging from single years to the groupings used by the U.S. Census Bureau and others. Difficulties arise with these grouping when the same ones are not used and when they may constitute large but only partially overlapping groupings. While transformations are possible, they may not always yield reliable or valid results. The age cohorts generally used by the Census Bureau most recently include: total

(all ages), 0-4, 5-9, 10-4, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, and so on, and combinations of these cohorts.

The age classification used by the Census Bureau and others is based on the age of the person at his/her last birthday.[4] The information was obtained by question on age and date (or month or year) of birth in 1970, and by question with date of birth only in 1960. An age-cohort is defined as "thos peers who were born during the same specified time period."

Age data are important to the model since the number of children in any age-cohort (further classified by population demographics such as race and six) can form an important part of the basis for predicting the size of the college and population at various future points in time.

Number 4 addresses the population demographic categories of central concern to this study -- the race category in particular. To the extent possible, race in this study is grouped in terms of "white," "black", "other (minority)". and "total" population.

The "concept" of race as used by the Census Bureau presumably is derived from what is commonly accepted by the general public as a definition.[5] However, the manner in which people have been assigned to a category, and the racial classifications and the definitions themselves, have varied over time. For example, prior to 1960, determination was made mainly on the basis of observation, and inquiry was made only by the census enumerator when in doubt about the proper classification. Beginning in 1960, self-enumeration or self-identification was relied upon solely for racial classification. The classification and definition of race has also changed considerably over time. For example, in 1960, race was categorized by color. The term "color" was used to divide the population into two groups: white

and non-white. The non-white group included: Negroes, Native Americans, Japanese, Chinese, Filipino, Koreans, Hawaiians, Eskimos, Aleus, and others. Persons of Mexican birth or ancestry who were not Indian or another non-white race, were classified as white. However, in the 1970 census the term "non-white" was dropped, and replaced by "Negro and "Other Races". Emphasis was put on the Negro because in 1950, 90 percent of all non-whites in the U.S. were Negroes. Nevertheless, in some geographical regions of the country, other races, in fact, do out-number the Negro category. In the 1970's the term "black" became the more widely accepted term and is presently being used by the Bureau. The term "others" includes those minorities which are not included in the "black" category or the "white" category.

The Office of Civil Rights (OCR) has used five racial/ethnic categories in their Higher Education General Information Survey: Fall Enrollment in Higher Education, for the years 1968, 1970, 1972, 1974, and 1976: Black, Non-Hispanic: American Indian or Alaskan Native, Asian or Pacific Islander; Hispanic, and White, Non-Hispanic.

The racial categories used by OCR are subject to a number of investigative limitations.[6] For example, a given student may be included in a group with which he/she identifies, appears to belong, or is considered to belong to. The educational institutions are responsible for the method by which racial and ethnic information is collected. A widely-used method is post-enrollment, self identification by the students. However, a verification procedure is used by the OCR to ascertain the accuracy and completeness of the students' responses to the survey. The institution may use a questionnaire to collect further data or may have the students identify themselves by name. To the extent possible, race in this study is grouped

in terms of "white", "black", "other (minority)", and "total" population.

For this study, the data collection effort has been confined to the white, black, and total categories.

Whenever population censuses have been taken, they have nearly always included sex as a category and, for the most part, have been cross-classified by race and age. Additionally, projections have been made by the Census Bureau to the year 2015. Vital statistics, for the most part, are data-tabulated by sex, race, and age, also.

In 1960, the respondent entered the sex of the household members on the Advance Census Form that was mailed earlier, and that was made available to the enumerator when visits were made to the households. If the enumerator had any doubts, or if the item was left blank, the enumerator would ask the question specifically. However, in 1970 the procedure was changed somewhat. Instead of obtaining the missing information by a personal visit, the enumerator obtained it over the telephone. About 60 percent of the population was covered by telephone.

Finally, in the major classification categories, allowance is made for so-called "causal" factors (Number 5), although such factors are not specifically treated in the model at its present stage of development. Factors such as "income level of family", "college-going rates of parents", other economic factors such as the "cost of education" and the "availability of student financial assistance", "post World War II baby boom", and many other factors, can significantly impact the numbers and ratios of the population that do, in fact, go to college in any given time period (See Chapter 3). Some of these may be predicted reasonably accurately; others cannot be foreseen or assessed with reasonable accuracy. Some may have significant

impact on enrollments and attainments; others may have little impact. Any complete formulation of a projection model nevertheless must include these factors to the extent possible.

With these categories as a basic framework for the classification of all data relevant to this study on population, enrollment, and attainment, attention in the model is given next to the actual and potential flow of the population in terms of educational progression.

"Births" (Number 6) of course, initiates the flow through the model for any given individual. Current declines in birth rates in recent years for the population as a whole and particularly for the black subpopulation can be expected to have a substantial impact on the number and ratios of blacks and whites who come of "college-going age" in future years.[7] Declining rates will progressively reduce the size of the college-going age-cohorts (proportionately more so for the black cohorts) if present trends continue. However, it appears that such declines have begun to stabilize and, if proven to be a continuing trend, birth rates will not require significant adjustments to serve as predictors of future college-age populations.

Measurement units for births are expressed in terms of (1) the number of live births per 1000 of the population in each of the major geographical regions, (2) time periods, (3) population demographic categories, and (4) the ratios among the demographic categories.

Next, deaths (Number 7) must be considered in making further adjustment to the size of the population in any given age-cohort born at a particular time. Deaths, which reduce the size of the population can occur, of course, at any age up to and including college ages (though more deaths occur at birth, and in still slightly higher numbers for blacks). This suggests that

projections of college-age populations must be adjusted further in terms of the numbers and ratios of borths-to-deaths and in terms of each of the population demographic categories.

Deaths may be expressed in terms of (1) the number of deaths per 1000 population, (2) the ratio of births-to-deaths, (3) actual numbers by time period and age-cohort, and (4) the ratios among the race and sex demographic categories.[8]

In-migration, out-migration, and net migration (Numbers 8 and 9) can be of significance with respect to a given geographical region in forecasting the college-age and college-going populations.[9] For example, examination of the data collected for each state reveals that different migration patterns exist for blacks and whites among the states. Again, migration (in or out) can occur at any age; and, hence, should take into account the time period of birth of an individual to college-age, or perhaps more simply, should consider its impact on the size and composition of the college-age cohorts.

Migration, as with the birth and data, may be expressed in terms of (1) the actual numbers by geographical region, (2) time period, (3) age-cohort, (4) race and sex, and (5) the ratios of in-to-out migration (net migration) for each of these categories.

The population of pre-school (Number 10) and primary school (Number 11) age-cohorts does not appear to be directly relevant to establishing a quantitative basis for parity, since most children successfully complete the primary school level. However, to the extent that the numbers (and hence the ratios) of the so-called mentally and physically handicapped children vary between blacks and whites, they may differentially impact high school

attendance and, in turn, college attendance for the respective sub-populations.

The size of the high school age population (Number 12) is directly relevant to establishing statistical bases for college-going parity, since the numbers of students actually enrolled and the number who graduate do have a significant bearing on the number of people who are potentially educationally qualified to enter college and, further, who are equipped with the necessary skills to cope successfully with the college environment. Hence, measures of both enrollment and attainment become relevant in determining the size and proportions of the college-qualified sub-populations among blacks and whites.

"Enrollment", as used by the Census Bureau, refers to enrollment in any regular educational institution, public or private, for systematic instruction. The number may be expressed in terms of single years for all grade levels and/or by individual grade levels in schools, or by the ratios between blacks and whites or male and female, for example.

In the 1960 Census data, persons were considered enrolled if they reported themselves to be attending a regular school or college at any time between February of that year and the time of the enumeration.

With respect to attainment, many measures are possible (for example, Number 13, Number 14, and Number 15): (1) the number of years completed (usually reported in terms of median years); (2) the number who received a diploma; (3) standing in graduating class in terms of grade-point average (GPA); and (4) placement on standardized tests. Of course, attainment is impacted by drop-out and re-enrollment rates in high school levels and beyond, particularly for a given age-cohort. Also, delays in receiving diplomas such as enlisting in the military service before completing high school education and completing high school education through the GED

program need to be considered in determining the attainment rate of blacks. Finally, type of high school curriculum, such as liberal arts, vocational, and others, can influence the size and composition of the college-going population.

The number and ratios of those students actually graduating from high school theoretically define the limits of the size of the college-going population.

However, actual college enrollments will always be considerably less for many reasons (Number 16). Some individuals simply may not be interested in college; others may elect to delay their enrollment in college (Number 17). It is important to consider the fact that many blacks tend to delay college entrance, and hence, many black individuals may become part of an older college-going age-cohort than whites. Further, many are limited by lack of financial resources. Also, the trend toward "continuing education" may further complicate defining the college-age cohort.

Further adjustments must be made in the size of the actual college-going population for any given state. Some may attend college in a state other than their home state, (Number 18); others may attend college from another state, (Number 19); or, they may go to a college in their home state (Number 20). Again, these figures may be quite different for blacks and for whites, although the availability of financial aid programs appears to be increasing the mobility of the black subpopulation.

The next three branches in the model provide additional categories in which enrollment and attainment data need to be classified to further pinpoint the bases for equal opportunity and attainment for blacks, and to predict and assess the potential impacts --positive and negative--of desegregation plans on the various types of higher educational institutions themselves. These categories apply to enrollment and attainment at both

the undergraduate and graduate school levels.

The first of these categories (Numbers 21 and 22) provide for classifying student enrollment and attainment data in terms of historically and/or predominately black or white schools.

Historically, black colleges and universities are defined as "those institutions that were primarily founded for black Americans, negroes, or colored people" (although for the most part their charters were not exclusionary).[12] They are defined further as having served the black population for at least two decades; however, most such institutions are fifty to 100 years old or older. Predominatly black colleges and universities are defined in terms of having black enrollments of 50 percent or greater; and, for the most part, include the historically black institutions.

Next, the colleges and universities may be further divided in terms of public or private status (Numbers 23 and 24). "Public schools" refers to institutions supported by national, regional, or local government agencies. "Private Schools" are institutions supported by non-government organizations, such as religious groups.

The final categories delineate whether the institution is a 2-year college or a 4-year (or greater) college or university (Numbers 25 and 26). It should be noted that any given educational institution can be classified in terms of all three sets of these categories -- hence, they do not necessarily represent mutually exclusive categories. This is indicated in the model through replication of the branches. Further, although this study focuses on the impact of the state desegregation plans on public institutions, it may be expected that all types of schools will be impacted by such plans in terms of student enrollments, finances, curricula and others.

Within these categories the first sets of measures are concerned with undergraduate school enrollments. These may include (1) the total number and ratios of students enrolled in any given year; (2) the number and ratios of students enrolled in various types of curricula, and (3) degree programs (including bachelor degree, associate degree, or a vocational or technical degree).

However, the size and types of enrollments are subject to a number of different definitions and sources of variance. OCR, for example, defines full-time students as those whose academic coursework loads or other required activities are at least 75 percent of the normal full-time load. Part-time students are defined as carrying less than 75 percent of the normal full-time load. First-time freshmen are defined as those entering freshmen who have not attended any college or university previously. Also included in this category are students who enter with advanced standing at the freshman level as a result of credits earned before graduation from high school.

Tracking and tabulation of enrollments of students in any given geographical region is complicated further by the transfer of students (Number 27) from one school to another, both prior to graduation and afterward.

The next set of branches in the model refer to attainment. As noted above, students may transfer, they may graduate (Number 28), or they may drop out (Number 29) after having completed one or more years of undergraduate school. It should be noted that, except for those students who transfer or transfer graduation, this is the end of the educational flow for two-year colleges.

Measures of attainment can include: (1) the number of years completed, (usually expressed in terms of the median number of years and possibly by age (Census Bureau)); (2) by the number who graduate; or (3) by type of program and degree.

At the graduate school level, the branches in the model reflecting enrollment and attainment are similar to those for the undergraduate levels; hence, the definitions and measures are also similar.

As for undergraduate schools, the population may be divided into those who continue on to graduate school (Number 30), and those who do not continue (Number 31).

A further branching of the model occurs at this point in terms of graduate (Number 32), and professional schools (Number 33). This branch provides the means by which the numbers and proportions of blacks taking medical, dental, legal or other programs classified as "professional" can be isolated.

Finally, in terms of attainment in undergraduate schools, the students may transfer, (Number 34), graduate (Number 35), or drop out after completing one or more years (Number 36).

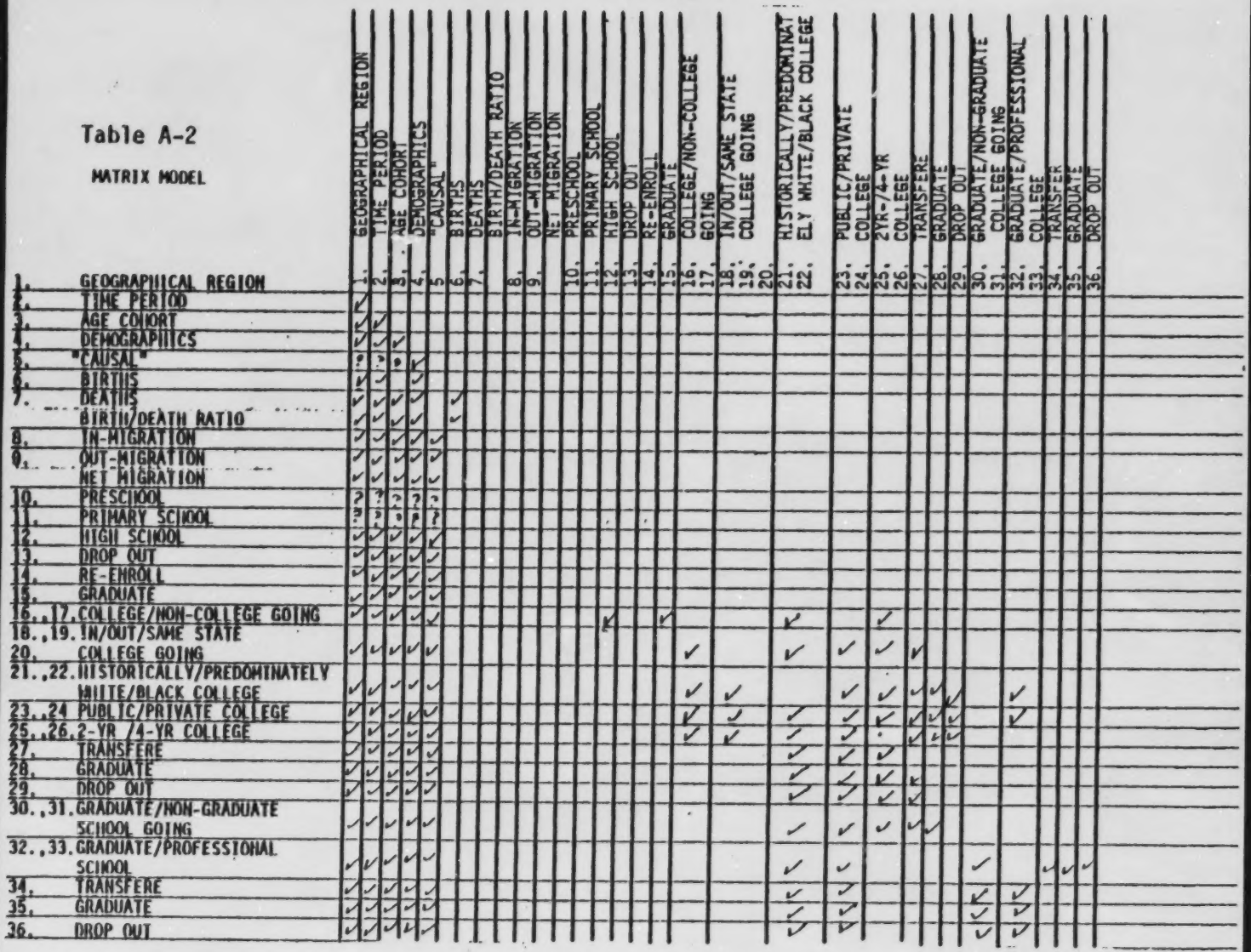
Measures of attainment, again, (Number 35) can include: (1) the number of years completed expressed in median years; (2) the number who graduate and receive a master's, doctoral, or intermediate degree, and (3) the type of program.

Table 3.2 illustrates the matrix model that has been developed in this study to systematically identify the various arrays and tabulations of data that would be most useful in revealing status and trends related to the analysis of projections within the framework of parity factors.

The column and row headings in the matrix are the same as those used for classifying data in the flow model. Based on this matrix, Table 3.1 summarizes the list of tables that are considered meaningful and useful to generate. It should be noted that all of the tables listed have the geographical regions, time periods, age-cohorts, and demographics as their basic structure. It should be noted further that none of the tabulations assume disaggregation of data below the state level. However, in the case

Table A-2

MATRIX MODEL



of individual state policymaking and planning, and most certainly the implementation of desegregation programs, disaggregation at the individual institution level would be useful.

Methods

The methods by which the models employed in this study have been developed have already been treated in considerable detail and therefore need little additional description at this point. However, it is important to note that: (a) the models have been developed using basically rational methods, and (b) the models serve as a framework within which all data source identification, data collection, data analysis and verification, data presentation, and analytical activities have been carried out.

Beginning at the Federal agency level, population and/or educational data (as a-propriate) were sought from the following identified sources:

- Education and Social Stratification Branch and Population Division, U.S. Bureau of Census
- National Center for Health Statistics
- Scientific and Technical Information Branch, Office of Civil Rights, and National Center for Education Statistics, U.S. Department of Health, Education and Welfare.

At the state level, a variety of agencies were identified and contacted for each of the ten states of concern to this study. In most cases, a considerable amount of data was received from each state (See Appendix B).

It should be noted that no attempt was made, nor could be made in this study to generate data directly (such as through surveys). Hence, these secondary sources were relied upon almost exclusively in this study. Other tertiary sources were received, and are reported in Chapters 3 and 4.

A complete listing of the federal and state agencies contacted is provided in Table 4.3 of this report. Data received from these sources were, for the most part, in the form of hard copy. In one case (OCR), magnetic tapes were obtained and played through ISE's computer facility at the Brookings Institute.

As the data were received from these sources, they were sorted in terms of the tables specified by the Type I relationship models. Additionally, they were checked for their completeness in terms of the models, comparability of the classification categories and measurement units both within and among sources, and for any evidence of sampling and/or estimating variability or errors.

To the extent that the data permitted (in terms of the requirements specified by the Type I status and trend models), the data were arrayed both manually and through the use of the computer to produce the tables contained in the results section of this report.

Enrollment projections for the 10 states were based on the projections of state populations developed by the United States Bureau of the Census and were derived through the use of the age-specific enrollment rate method (low alternative projection) employed by the National Center for Educational Statistics (United States Office of Education) for the first time in 1978. In this method, enrollment rates based on age were applied to population projections for the years 1975 through 2000.

By using the low alternative projection of the age-specific enrollment rate method, it was assumed that enrollment rates would remain constant at the average of their 1975 and 1976 levels, thereby increasing to 11.6 million students by 1981 and declining to 11.0 million students by 1986. Hence, it is assumed that there will be 6.1 million full-time students by 1976, including a significantly large proportion of older students enrolled part-time. It is assumed that full-time equivalent enrollment will increase to 8.5 million by 1980 and will decline to 7.9 million by 1986. Based on this assumption, there will be 376,000 fewer FTE students than in 1976.

The NCES method was selected for use in this study for two reasons: (1) it takes into consideration broad changes which have occured in higher education relative to the distribution of age and (2) it is cost-effective. The age-specific rate treats sex, attendance status and type of institution. Further, the conversion to full-time equivalent enrollment allows for a significant increase in the number of part-time students. In contrast, most of the other projection methods tend to focus on the traditional college-going cohort (18-to-21 age-group or 18-year-olds), although their assumptions (similar to those of NLES) speak to the leveling off of higher education enrollments in the decades ahead. However, the rapidly-changing character of higher education warrants that the projections contained herein be viewed with caution, especially since they do not account for a number of critical economic and social variables.

The estimates and projections of state populations provided by the Census Bureau by age, race and sex cover the period 1970 through 2000. These projections parallel the Series II set of national projections found in Series P-25 Current Populations Reports. The Series II set of national projections assumes that the birth rate per woman will approximate 2.1; that the death rates will decline moderately; and that about 400,000 persons will continue to migrate. State Population Projection Methodology is in Appendix C.

TABLE A-3

DATA OBTAINED FROM SOURCES

Source	State	Year	Age Cohort	Race	Sex
1 Population					
1.1 Federal Sources					
1.1.1 Population and Education Branches U.S. Bureau of Census	Historical All Ten States National	1950 1960 1970 1975	Under 5 5-9 10-14 15-19 20-24 25-29 30-34 And for each 5 year cohort up to 85 and older. Total	Black White Nonwhite Other Total	Male Female

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

Source	State	Year	Age Cohort	Race	Sex
1.1.1 continued	Projected				
	All Ten States	1980	Under 5	Black	Male
		1985	5-14	All Races	Female
	National	1990	15-24		
		1995	25-34		
		2000	35-44		
			45-54		
			55-64		
			65 and older		
			Total		

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

Source	State	Year	Age Cohort	Race	Sex	
1.1.2 National Center for Health Statistics	All Ten States	1950	.	Black	Male	Births
		1960		White	Female	Deaths
		1968		Total	Total	
		1970				
		1972				
		1974				
		1975				
		1976				
1.1.3 Office of Civil Rights, HEW	Enrollment and Attainment data only; see 2.					

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

	Source	State	Year	Age Cohort	Race	Sex	
1.1.4	Economic Research Service, U.S. Department of Agriculture	All Ten States	1950-1960 1960-1970	0-4 5-9 10-14 15-19 20-24 25-29 30-34 35-39 40-44 Total	Negro and Others White Total	Male Female Total	Net Migration

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

Source	State	Year	Age Cohort	Race	Sex
1.2 State Sources		Historical			
1.2.1 Florida	Florida	1976	0-14	White	Male
			15-24	Nonwhite	Female
			25-44	Total	Total
			45-64		
			65+		
			Total		
		Projected			
		1980			Male
		1985			Female
		1990			Total
		2000			

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

Source	State	Year	Age Cohort	Race	Sex
		Historical			
1.2.2 Georgia	Georgia	1976			Total Population
		Projected			
		1980			Total Population
		1985			
		1990			
		1995			
		2000			
		2005			
		2010			
1.2.3 Maryland	Maryland				None

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

Source	State	Year	Age Cohort	Race	Sex
		Historical			
1.2.4 North Carolina	North Carolina	1960	0-4	White	Male
		1970	5-9	Nonwhite	Female
		1975 est.	10-14	Total	Total
		1976 est.	15-19		
		Projected	20-24		
		1977	25-29		
		1978	30-34		
		1979	35-39		
		1980	etc. up to 85+		
		1981			
		1982			
		1983			

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

Source	State	Year	Age Cohort	Race	Sex	
		Projected				
1.2.5 Pennsylvania	Pennsylvania	1975				Total Population
		1980				
		1985				
		1990				
		1995				
		Projected				
1.2.6 Virginia	Virginia	1980	0-4	White	Male	
		1985	5-9	Nonwhite	Female	
		1990	10-14	Total		
		1995	15-19			
		2000	etc. in 5 year increments to 85+			

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

Source	State	Year	Age Cohort	Race	Sex
		Projected			
1.2.7 Alabama	Alabama	1976	0-4	White	Male
			5-9	Nonwhite	Female
			10-14	Total	Total
			etc. in 5 year increments to 85+		
		Projected			
1.2.8 South Carolina	South Carolina	1975	0-4	White	Male
		1980	5-9	Nonwhite	Female
		1985	10-14	Total	Total
			15-19		
			etc. in 5 year increments to 85+		

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

Source	State	Year	Age Cohort	Race	Sex
1.2.9 Tennessee					
1.2.10 Texas					None

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

Source	State	Year	Age Cohort	Race	Sex	
2. Enrollments						
2.1 Federal Sources						
2.1.1 Population and Education Branches, U.S. Bureau of Census	All Ten States	1950 1960 1970	5-24 in year increments 25-29	Total Nonwhite Negro (1970 only)	Male Female Total	Public/Private All Types of Schools Elementary (1-8) High School (9-12) College (1-5 or more years)
2.1.2 National Center for Health Statistics	-----					

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

	Source	State	Year	Age Cohort	Race	Sex	
2.1.3	Office of Civil Rights, HEW	All ten states	1968		White		Undergraduate
					Negro		Two-year
							Four-year
							Historically - Predominantly Black
							Predominantly White
			1970		Negro		Undergraduate
					All Other		Graduate
					Total		Professional
							Public
							Private
							Two-year
							Four-year
							Historically - Predominantly Black
							Predominantly White
							Full time

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

Source	State	Year	Age Cohort	Race	Sex	
2.1.3 continued		1972		Negro		Undergraduate
				All others		Graduate
				Total		Professional
						Public
						Private
						Two-year
						Four-year
						Historically - Predominantly Black
						Predominantly White
						Full time
						Part time
		1974		Black	Male	(all of the above)
				All Others	Female	
				Total		

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

Source	State	Year	Age Cohort	Race	Sex	
2.1.3 continued		1976		Black	Male	(all of the above)
				All Others	Female	
				Total		
2.1.4 National Center for Educational Statistics, HEW				No race categories		
2.2 State Sources						
2.2.1 Florida	Florida	1973		Black		3, 6, and 9 Levels
		1974		Other		
				Total		
		1975		Black, Non-Hispanic		Elementary (1-8)
		1976				High School (9-12)
		1977		White, Non-Hispanic		
				Total		

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

Source	State	Year	Age Cohort	Race	Sex	
2.2.2 Georgia	Georgia	1954-55		White	Male	K-12
				Colored	Female	Elementary
				Total		High School
		1963-64		White	Male	1-12
				Negro	Female	
				Total		
2.2.3 Maryland	Maryland	1970		Negro		Total Enrollment
		1971		Caucasian		
		1972		Other		
		1973		Total		
		1974				
		1975				
		1965-77 in one year intervals				K-12 (by year)

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

Source	State	Year	Age Cohort	Race	Sex	
2.2.4 North Carolina	North Carolina	1964-65 to 1976-77 in one year intervals				K-12 (by year)
2.2.5 Pennsylvania	Pennsylvania	1971-77 in one year intervals		White Negro Other		K-12 (by year)
2.2.6 Virginia	Virginia	<u>Historical</u> 1949-50 to 1964-65 in one year intervals <u>Projected</u> 1976-77 to 1986-87 in one year intervals		White Negro Total		Total Enrollment K-12 (by year) Total Enrollment

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

Source	State	Year	Age Cohort	Race	Sex	
2.2.7 Alabama	Alabama					None
2.2.8 South Carolina	South Carolina	1950-51 to 1962-63 in one year intervals		Negro White Total		Elementary High School
2.2.9 Tennessee	Tennessee	Historical 1972-77 in one year intervals Projected 1978-79 in one year intervals				1-12 (by year) Total Enrollment
2.2.10 Texas	Texas	1979-80 est. 1980-81 est. 1981-82 est.				Total Enrollment

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

Source	State	Year	Age Cohort	Race	Sex	
3 Attainment						
3.1 Federal Sources						
3.1.1 Populations and Education Divisions, U.S. Bureau of Census	All ten states	1950	25,older	White	Male	Median Years Completed
		1960		Nonwhite	Female	
		1970		Total	Total	
		1970	14,older	White		Median Years Completed
				Black		
				Total		Percentage Graduated
	Florida	1977	14-19	Black	Male	Median Years Completed
	Georgia		20-24	White	Female	
	N. Carolina		25-29	Total		
	Pennsylvania		30-34			
	Texas		35-44			
	Virginia		45-54			
			55-64			
			65, older			

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

Source	State	Year	Age Cohort	Race	Sex	
3.1.2 Office of Civil Rights, HEW	All ten states	1976		Black, Non-Hispanic White, Non-Hispanic Total	Male Female	Type Degree (associate, bachelors, masters, professional, doctors)
3.1.3 National Center for Educational Statistics, HEW				No race data		
3.2 State Sources						
3.2.1 Florida	Florida	1977		Black, Non-Hispanic White, Non-Hispanic Total	Male Female	Graduates Dropouts

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

Source	State	Year	Age Cohort		Race	Sex	
3.2.2 Georgia	Georgia	1958-59	6	13	White	Male	High School Dropouts, Grade 1 through 12
		1959-60	7	14	Black	Female	
		1960-61	8	15	Both		
		1961-62	9	16			
		1962-63	10	17			
		1963-64	11	18			
			12	Over 18			
				Total			
3.2.3 Maryland	Maryland	1978					Projected Enrollment by Grade, K - 12
		1979					
		1980					
		1981					
		1982					
		1983					
		1984					
		1985					
		1986					
		1987					

Maryland continues

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

Source	State	Year	Age Cohort	Race	Sex
3.2.3 Maryland (continued)		1964-65 by year to 1976-77			Pupil Withdrawals, 7-12
3.2.4 North Carolina	North Carolina	1975-76			High School Dropout Rate
		1976-77			
		1970-71 by year to 1976-77		Black	High School Enrollment
				White	
				Total	

TABLE A-3 DATA OBTAINED FROM SOURCES (continued)

Source	State	Year	Age Cohort	Race	Sex	
3.2.5 Pennsylvania	Pennsylvania	1975-76				High School Dropout Rate
		1976-77			Male Female	High School Dropout Rate
		1967				Graduates/ Degrees
		by year to				Level
		1976				High School
						Community
						University
						Other
						Control
						Public
						Private
						Degrees
						Associate
						Bachelor
						Other

TABLE A-3 DATA ORTAINED FROM SOURCES (continued)

Source	State	Year	Age Cohort	Race	Sex	
3.2.6 South Carolina	South Carolina	1968-69 by year to 1976-77		White Nonwhite Total	Male Female	High School Enrollment 1 - 12
		1971-72 by year to 1976-77		Black White Total		High School Dropout Rate, 1 - 12
3.2.7 Virginia	Virginia	1976-77 by year to 1986-87				Enrollment Elementary High School Total

FOOTNOTES

1. U. S. Bureau of Census, U. S. Department of Commerce, General Population Characteristics, United States State Summaries, 1950, 1960, 1970. Government Printing Office, Washington, D. C. Unpublished data.

2. U. S. Department of Health, Education and Welfare/Office of Civil Rights, Racial and Ethnic Enrollment Data from Institutions of Higher Education. Fall 1968, 1970, 1972, 1974, U.S. Government Printing Office, Washington, D. C.

3. U. S. Census, Ibid.

4. Henry S. Shryrock, Jacob S. Siegel, and Associates, "The Methods and Materials of Demography: Washington, D. C.: U. S. Bureau of Census, U. S. Government Printing Office 1971.

5. U. S. Department of Health, Education and Welfare/Office of Civil Rights, Ibid.

6. U. S. Bureau of Census Education Branch, unpublished data (see appendix).

7. Henry Shryrock et. al., Ibid.

8. National Center for Health Statistics, Vital Statistic Rates in the United States: Natality, 1940-1960, 1970, 1972, 1974, 1976, Washington, D. C.

9. National Center for Health Statistics, Vital Statistics Rates in the United States: Mortality, 1940-1960, 1970, 1972, 1974, 1976, Washington, D. C.

10. Gladys Bowles & James Tarver. "Net Migration of the Population, 1950-1960, by Age, Sex, and Color." Population Migration Report I, Volume I, Parts 1-5, Economic Research Service, U. S. Department of Agriculture, Washington, D. C.: U. S. Government Printing Office, 1965.

11. Gladys Bowles, Calvin Beale, and Everett Lee. "Net Migration of the Population, 1960-1970, by Age, Sex and Color." Population Migration Report 1960-70, parts 1-6, Athens, Georgia: Economic Research Services, U. S. Department of Agriculture; the Institute for Behavioral Research, University of Georgia; and Research Applied to National Needs, National Science Foundation, cooperating, 1975.

12. Elias Blake, Institute for Services to Education, Washington, D. C.

13. Office of Civil Rights, Department of Health, Education and Welfare Education Division, Higher Education General Information Survey (HE615 XI): Instructions and Definitions for Fall Enrollment in Higher Education, 1976.

14. Projections of Education Statistics to 1986-1987, Martin H. Frankel, editor. Washington, D. C., National Center for Educational Statistics, 10-12, 117-146.

15. Webster, William J. "An Empirical Comparison of Selected Enrollment Projection Formulas," Journal of Educational Research 64 (April, 1971): 375-81.

APPENDIX B

State Population Projections Methodology

UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

OFFICE OF THE DIRECTOR

SEP 2 5 1978

Ms. Mary von Euler
Desegregation Studies
National Institute of Education
Department of Health, Education, and Welfare
Washington, D. C. 20208

Dear Ms. von Euler:

In response to your request of September 13, 1978, we are enclosing the estimates and projections of the population of selected States by age, race, and sex, for each quinquennium 1970 to 2000 and a brief description of the methods and assumptions used to produce this set of population projections. We do not prepare any projections of State population beyond the year 2000.

Three alternate series of State projections, Series II-A, II-B, and II-C are presented. All three are consistent with the Series II set of national projections published in Current Population Reports, Series P-25, No. 704, which assume that fertility values will move towards 2.1 births per woman, mortality rates will moderately decline, and net immigration will continue at 400,000 persons per year. The letters A, B, and C refer to the interstate migration assumption employed; Series II-A assumes that the 1965 to 1975 migration patterns will continue, Series II-B assumes that the 1970 to 1975 migration patterns will continue and Series II-C assumes no migration between States after 1975. A more complete discussion of the methods, assumptions, and the three series of population projections by age, race, and sex for each State will be presented in the upcoming Current Population Reports, Series P-25, to be published in the early fall.

We are providing these data to you prior to publication with the understanding that they are for administrative use only. If you have any additional questions concerning these projections, please contact Signe Wetrogan, Population Projections Branch, at 301-763-5300.

Sincerely,

MANUEL D. PLOTKIN
Director
Bureau of the Census

Enclosures

Summary of State Population Projections Methodology

The method used to produce these State population projections by age, race, and sex was the demographically-based cohort-component technique. In this technique each component of population change - births, deaths, and net migration - is handled separately. Furthermore, subgroups of the population - racial groups, military personnel, and college students - can be separately projected under the cohort-component methodology.

This particular set of projections begins with 1975 estimated data on State population by age, race, sex, and college and military status and projects these categories forward in five-year intervals to the year 2000. Outmigration rates and inmigrant proportions for 1970-75 were estimated by adjusting the 1965-70 State migration data by age, race, and sex to 1975 State estimates of total net migration. In the process, a 1975 estimate of State population by age, race, and sex was also created to serve as initial base date populations for the 1975-2000 projections.

Fertility and mortality assumptions for each State are consistent with the Series II national projections. Each State begins with its 1970-75 age-specific fertility and mortality rates but the ratio of these rates to the national rates is assumed to gradually approach 1.00 by the year 2020.

The differences in the three sets of projections are due to differing migration assumptions. Series II-C assumes no migration between States and is hence a purely illustrative series. Series II-A and II-B use different assumptions about interval civilian non-college migration rates. Series II-A assumes these trends will be the same as in the 1965-75 period while Series II-B uses the 1970-75 rates. The migration rates used here consisted of outmigration rates based on the State population at the beginning of the period which survived until the end of the five year period and of the proportion of all interstate migrants during the period that moved to the State.

Migration of three other groups - immigrants, college students, and the military - were handled separately. The nationally projected number of immigrants to the United States are divided among States in the same ratio as shown for that group in the 1970 Census data on 1965 to 1970 migration. College students outmigration rates are the same as in the 1965 to 1970 period. College student immigration is calculated by assuming that nationally projected college enrollment will be distributed by States in the same ratio as in Fall, 1974 and that the proportion of these college students migrating to each State from every other State will be the same as in the 1965 to 1970 period. The military population of each State is assumed to remain constant but the number of persons leaving a State to join the military is not equal to the number of persons entering that State after leaving the

military. Migration to the military is in proportion to the State population while persons leaving the military are assumed to have the same proportions migrating to each State as does the civilian non-college population.

The final projected population totals were created by adding these components to the appropriate beginning population for each State. The sum of the population for all States were then adjusted to equal the national projected population totals from Series II of P-25, No. 704.

APPENDIX C

Data Sources Utilized in This Study

DATA SOURCES UTILIZED IN THIS STUDY

Federal Agencies

- Bureau of Census
  U. S. Department of Commerce
  FOB. 3
  Room 2312
  Suitland, Maryland 20233

  Contact: Larry E. Suter, Chief
  Education and Social Stratification Branch
  Edith McArthur
  Statistician

- Bureau of Census
  Department of Commerce
  Population Division
  Suitland, Maryland

  Contact: Dr. Zitter

- National Center for Health Statistics
  Room 1-57
  Central Building
  Hyattsville, Maryland 20782

  Contact: Joy Fitzgerald
  (301) 436-8980

- U. S. Department of Health, Education and Welfare
  Scientific & Technical Information Branch
  Public Health Services
  Health Resources Administration
  National Center for Health Statistics
  Rockville, Maryland 20857

  Contact: Mable Smith
  (301) 436-8980

- U. S. Department of Health, Education and Welfare
  Office of Civil Rights
  Room 5146
  North HEW Building
  300 Independence Avenue, S. W.
  Washington, D. C.

  Contact: Colleen O'Connor

- Office of Civil Rights
  330 Independence Avenue, S. W.
  Room 4528
  Washington, D. C.

  Contact: Richard White/OCR Tapes
  Racial and Ethnic Enrollment in Institutions of Higher Education: Fall 1968, 1970, 1972 1974, and 1976

- U. S. Department of Health, Education and Welfare
  National Center for Education Statistics
  400 Maryland Avenue, S. W.
  Room 3055
  Washington, D. C. 20202

  Contact: Vantz Grant

State Agencies

- FLORIDA

  Director of Research
  Division of Population Studies
  Bureau of Economic and Business Research

  College of Business Administration
  University of Florida
  Gainesville, Florida 32611

  Management Information Systems
  Mr. Lavan Dukes
  Research Associate
  Room 275
  Knott Building
  Tallahasse, Florida 32304

- GEORGIA

  Office of Planning and Budget
  State of Georgia
  Executive Department
  270 Washington Street, S. W.
  Atlanta, Georgia 30334

  Contact Person: Terry D. Lawler
  Dr. Gena Wallace
  (404) 656-2400

o MARYLAND

Director of Research
Maryland Center for Health Statistics
State Department of Health and Mental Hygiene
O'Connor Building
201 West Preston Street
Baltimore, Maryland 21201

Ms. Mary Binebrink, Specialist
State Board of Education
P. O. Box 8717, BWI Airport
Baltimore, Maryland 21240

o NORTH CAROLINA

North Carolina Department of Administration
Division of State Budget and Management
116 West Jones Street
Raleigh, North Carolina 27603

Contact Person: Dr. Allen J. Barwick, Director
Research Planning Services

North Carolina State Board of Education
306 Education Building
Raleigh, North Carolina 27611

Contact Person: Ms. Betsy West/ (919) 733-4695
Mr. Alan Hill, Assistant Controller

State of North Carolina
Superintendent of Public Instruction
Raleigh, North Carolina 27602

Contact Person: H. T. Conner, Assistant Superintendent
Research and Development

o PENNSYLVANIA

Director of Research
Office of State Planning and Development
Post Office Box 1323
Harrisburg, Pennsylvania 17120

Governor's Office
Office of State Planning and Development
Commonwealth of Pennsylvania
Harrisburg, Pennsylvania 17120

Contact Person: Nathlie G. Sato

Commonwealth of Pennsylvania
Department of Education
Box 911
Harrisburg, Pennsylvania 17126

Contact Person: Paul C. Shatto, Jr.
Educational Statistics Associate

o VIRGINIA

Director of Research
Tayloe Murphy Institute
Graduate School of Business Administration
University of Virginia
Post Office Box 6550
Charlottesville, Virginia 22906

Contact Person: Gerald Fico, Jr.
Commonwealth of Virginia
Department of Planning and Budget
445 Ninth Street Office Building
Post Office Box 1422
Richmond, Virginia

o ALABAMA

Director of Research
Center for Business and Economic Research
Graduate School of Business
University of Alabama
Box AK 35486

Ms. Ruth Lockett
State Department of Education
Research Planning Division
State Office Building
Montgomery, Alabama 36130

o SOUTH CAROLINA

Director of Research
Division of Research and Statistical Services
South Carolina Budget and Control Board
1026 Sumter Street Suite 201
Columbia, South Carolina 29201

Contact Person: Laurin McArthur
State of South Carolina
Department of Education
Columbia, South Carolina

Contact Person: Jerry Wood
Management Section

o TENNESSEE

Director of Research
Tennessee State Planning Office
Division of State Planning
660 Capitol Hill Building
301 Seventh Avenue, North
Nashville, Tennessee 37219

Contact Person: Mr. Charles K. Pullen
Tennessee State Department of Education
Office of Commissioner
Nashville, Tennessee 37219

o TEXAS

Director of Research
Chief, Records and Statistics Section
State Department of Health Resources
410 East Fifth Street
Austin, Texas 78701

Contact Person: Mr. Tom Pollard, Statistician
Texas Department of Health
1100 West 49th Street
Austin, Texas 78756

APPENDIX D

Letters Documenting the Availability or Lack of Availability of Population and Enrollment Data

UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

August 24, 1978

Ms. Patricia Kilby-Franklin
Project Coordinator
Institute for Services to
Education, Inc.
2001 S Street, N.W.
Washington, D.C. 20009

Dear Ms. Kilby-Franklin:

I am pleased to comply with your request for information on school enrollment and educational attainment for the United States and ten selected States by sex and by race. All the available reports and data series appropriate to your request are enclosed and information not collected by the Census Bureau is listed.

We have enclosed the "School Enrollment" reports for the years 1967-1968, 1972, 1974, and 1976 and "Educational Attainment" reports for the years 1968, 1972, and 1973-1974 from the Current Population Reports series. You stated that you have access to the reports from the Decennial Census of Population for the years 1950, 1960, and 1970. From these reports you may obtain the information you requested on enrollment by level, sex, and race, and attainment (including different levels of college and high school years completed). These reports also provide data on the educational level of persons who did not complete high school.

The Bureau of the Census cannot fulfill your requests for information on several topics requested in your letter. No information is available from our surveys which distinguish enrollment in graduate programs from professional programs; the data are limited to year of college enrollment. Also, the Bureau of the Census has not published information on enrollment specifically for traditionally Black or White institutions of higher education. A table is enclosed, however, from the recently released Digest of Education Statistics 1977-78 on enrollment in predominantly Black institutions. Information on transfer students is probably only available from the individual institutions accepting transfers. The Bureau of the Census does not collect information on the number of students who shift their enrollment to different colleges.

At the State level, information is available only from the decennial census in 1950, 1960, and 1970 and from the Survey of Income and Education of 1976 (SIE). The SIE was designed to provide reliable data at the State level for children 5 to 17 years old living in poverty; consequently, the sample was designed to provide a reliable estimate of that population.

I have enclosed a table containing unpublished SIE data. The table contains data on total population and number of persons enrolled in school for the age groups 5 to 13 and 14 to 17 by sex and race for Florida, Georgia, Alabama, North Carolina, South Carolina, Tennessee, Texas, Pennsylvania, Maryland, and Virginia, and the total United States. Also enclosed is a description of the survey and the methodology used. This description contains a statement on the standard errors appropriate to use for data from each State and for the United States. It is advisable to take these standard errors into consideration in any analysis you attempt using data from the SIE. The standard errors represent a measure of the precision with which an estimate from the survey approximates the average result of all possible samples. A description of a method to construct estimates of the standard errors of the numbers provided from the SIE is contained on pages A-9 through A-27 of the enclosure. An example of the procedure is as follows: In the State of Florida the survey estimated a population of 115,000 Black males 5 to 13 years old. By linear interpolation, standard error Table A-4 shows that one standard error on an estimate of this size in Florida to be approximately 19,000. Thus, we can estimate that 68 percent of all possible samples would produce an estimate of the Black males 5 to 13 years old in Florida of between 96,000 and 134,000. As you can see, for many purposes these estimates may be considered too unreliable to be of use; however, in the absence of other data, you may find them helpful.

The data from the SIE have not been published in this form, but they have been made available to the public in computer files. You may, however, publish the data if you wish, keeping in mind the limitations of data derived from a survey of households. Should you decide to publish, please cite the Bureau of the Census as the source, and indicate that the data are from the Survey of Income and Education of 1976.

We appreciate your interest in the work of the Bureau of the Census. If we may be of further assistance, please call Larry Suter or Edith McArthur of my staff on 763-5050.

Sincerely,

MEYER ZITTER
Chief, Population Division
Bureau of the Census

Enclosures

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
NATIONAL INSTITUTE OF EDUCATION
WASHINGTON, D.C. 20208

September 13, 1978

Mr. John Long
Population Division
Bureau of the Census
United States Department of Commerce
Washington, D.C. 20233

Dear Mr. Long:

The purpose of this letter is to request census data for use in the Research Program on Problems Relating to the Desegregation of Higher Education, a study funded by the National Institute of Education and conducted by the Institute for Services to Education.

The specific data requested are Population Projections by Age, Race, Sex and State, 1980 to 2050. Access to this data will assist the Institute to project the higher education enrollments of ten southern states by race and sex.

Thank you for your support for this endeavor.

Sincerely,

Mary von Euler
Desegregation Studies

cc: Dr. Mary Carter Williams

COMMONWEALTH of VIRGINIA

JOHN R McCUTCHEON
DIRECTOR

Department of Planning and Budget
445 Ninth Street Office Building

August 16, 1978

Ms. Patricia Kilby-Franklin
Project Coordinator, NIE Study
Institute for Services to Education, Inc.
2001 S Street, N.W.
Washington, D. C. 20009

Dear Ms. Kilby-Franklin:

Please find the enclosed enrollment projections that you requested. In addition, I have included population projections by age, race, and sex for 1985, 1990, and 1995 for the Commonwealth of Virginia. The methodology used in projectiong population figures for the State is a modified cohort-component method which is a modification of the Hamilton-Perry technique. While figures are projected on a ten-year basis, intervening years population figures are determined through interpolation. Before our figures are released they are examined as to their consistancy with the projections of employment and population developed in our Economic Base Analysis program (see enclosed methodology statement).

There are no formal methodology statements for enrollment projections by the Department of Education (primary and secondary) nor by the State Council of Higher Education for Virginia (SCHEV) (college enrollments). As you can see none of the enrollment projections are categorized by age, race or sex. The Department of Education uses a simple cohort-survival technique for making enrollment projections, with various assumptions, (SCHEV uses a similiar technique, but also incorporates the use of some of our population projections). If you require additional explanation please contact Mr. Tom Lewis of Educational Research and Statistical Service, Department of Education, 1312 E. Grace Street, Richmond, Virginia 23219; or Ms. Karen Jaskulski State Council of Higher Education for Virginia (address found in enclosed blue document)

I hope this information satisfies your requirements. If I can be of further assistance, please do not hesitate to contact me.

Yours truly,

Gerald J. Fico, Jr.
Economist

Enclosures

July 13, 1978

Patricia K. Franklin
Project Consultant, ISE
Institute for Services to Education, Inc.
2001 S Street N.W.
Washington, D.C. 20009

Dear Ms. Franklin:

In response to you letter of July 5, requesting student enrollment projections by age, race and sex for 1980-2000 in the Commonwealth of Virginia, I know of no institution or agency, public or private, that computes or projects this type of information. First of all, it is unclear whether you are requesting student enrollment projections for primary and secondary education or for higher education. We do have some data for both, but the enrollment figures are projected by two different agencies - the Department of Education and the State Council of Higher Education for Virginia (SCHEV). If you will provide me with more specific information as to which type of enrollment figures you require, I shall be happy to forward any available data in existence. Second, although enrollment projections are available for primary and secondary education, the projections are derived by grades and not by age, race and sex. Similarly, enrollment projections for institutions of higher education are projected only by a total number for each institution and only up to 1988; no enrollment projections are available by age, race and sex. Finally, this agency (DPB) is assigned the responsibility for population projections (by age, race and sex) for the State, but the relationship between population projections and enrollment projections is tenuous at best. The methodologies employed are quite dissimilar and for different purposes, so that direct comparability between each is highly unlikely - if not impossible. In addition, population figures are available only in broad categories, i.e., white/nonwhite and five-year age groupings.

I have given you a brief overview of the types of projections available for Virginia. If any of the projections appose your requirements, I shall be happy to furnish them.

Yours truly,

Gerald J. Fico, Jr.
Economist

State of Maryland

MARYLAND CENTER FOR HEALTH STATISTICS
DEPARTMENT OF HEALTH AND MENTAL HYGIENE
201 W. PRESTON STREET · BALTIMORE, MARYLAND 21201 · AREA CODE 301 · 383-2350
NEIL SOLOMON, M.D., PH.D., SECRETARY

July 7, 1978

M's Patricia K. Franklin
Project Consultant
Institute for Services to Education, Inc.
2001 S Street N.W.
Washington, D.C. 20009

Dear M's Franklin:

Please find attached the resident Maryland births and deaths from 1960 to 1976 you requested. The 1977 data is not available at this time.

Sincerely yours,

Luther M. Frantz, Jr.
Research Analyst

LF/wl

Attachment

RESIDENT LIVE BIRTHS AND DEATHS WITH RATES PER 1,000 POPULATION BY RACE, 1960 - Maryland State

LIVE BIRTHS						DEATHS					
Number			Rate			Number			Rate		
Total	White	Nonwhite	Total	White	Nonwhite	Total	White	Nonwhite	Total	White	Nonwhite
77,496	60,093	17,403	24.8	23.2	32.8	27,992	22,447	5,545	9.0	8.7	10.5
78,190	60,697	17,493	24.4	22.8	32.1	27,714	22,215	5,499	8.7	8.4	10.1
76,325	59,130	17,195	23.2	21.7	30.7	28,471	22,693	5,578	8.7	8.4	9.9
78,146	60,770	17,376	23.2	21.8	30.2	30,304	24,272	6,032	9.0	8.7	10.5
79,003	61,388	17,615	22.9	21.5	29.8	29,540	23,781	5,759	8.6	8.3	9.7
74,137	57,526	16,611	21.0	19.7	27.4	30,981	24,958	6,023	8.8	8.5	9.9
72,117	56,157	15,960	20.0	18.8	25.7	31,712	25,421	6,291	8.8	8.5	10.1
69,726	54,167	15,559	18.9	17.7	24.3	31,159	25,280	5,879	8.4	8.3	9.2
68,407	52,955	15,452	18.1	17.0	23.0	32,596	26,102	6,494	8.6	8.4	9.7
69,067	52,980	16,087	17.9	16.8	22.9	32,402	25,976	6,426	8.4	8.2	9.1
69,336	52,719	16,617	17.6	16.4	22.6	32,790	26,290	6,500	8.3	8.2	8.8
65,399	49,036	16,363	16.3	15.2	21.2	32,305	25,762	6,543	8.1	8.0	8.5
58,310	43,289	15,021	14.4	13.3	18.9	33,396	26,755	6,641	8.2	8.2	8.3
53,642	39,372	14,270	13.2	12.1	17.3	33,033	26,607	6,426	8.1	8.2	7.8
53,075	38,661	14,414	13.0	12.0	16.7	32,972	26,474	6,498	8.1	8.2	7.5
52,732	37,629	15,103	12.8	11.7	16.8	32,071	25,688	6,383	7.8	8.0	7.1
52,672	37,098	15,574	12.7	11.7	16.8	32,563	25,928	6,635	7.8	8.1	7.1

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or Health Statistics
Department of Health & Mental Hygiene

DAVID W. HORNBECK
STATE SUPERINTENDENT

MARYLAND STATE DEPARTMENT OF EDUCATION
P.O. BOX 8717, BWI AIRPORT
BALTIMORE, MARYLAND 21240

August 10, 1978

Ms. Patricia Kilby Franklin
Project Consultant, ISE
Institute for Services to Education, Inc.
2001 S. Street NW
Washington, D.C. 20009

Dear Ms. Franklin:

Your letter of July 25, 1978, requesting data for Maryland public schools in the categories of enrollment, attrition (dropouts), and graduates has been referred to me for reply. Since our data in these categories are collected in summary form from the local school systems, we do not have the flexibility of combining the data elements to meet individual requests. For your request, therefore, we are providing information which is already available. For the item on race, detail by sex and grade are not compiled since our source reports are those required by the U.S. Office for Civil Rights, from local school systems. These do not include the sex and grade breakdown.

In the category, Enrollment Projections, we are enclosing Exhibit A, prepared by the Maryland Department of State Planning in which projections are made by grade only.

For the Enrollment category we are providing Exhibit B from our Annual Statistical Review in which enrollments are shown by grade by year.

For the Attrition category, Exhibit C provides statistics by cause of termination; grade and age data are not compiled.

In Exhibit D, Graduates, also from our Annual Statistical Review, data on graduates by sex are provided. For the past few years follow-up surveys have been made by our Division of Vocational-Technical Education in which race/sex data are compiled. For this information please contact -

Mr. Leo Lezzer
Coordinator
Management Information
and Accountability Section

I hope the enclosed information will be of assistance to you.

Sincerely yours,

R. Christine Hogan

R. Christine Hogan
Chief, Management
Information & Reports

RCH:ko

Enclosure

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF EDUCATION
BOX 911, HARRISBURG, PA. 17126

August 1, 1978

Mrs. Patricia Kilby-Franklin
Institute for Services to
Education, Inc.
2001 S Street NW
Washington, D.C. 20009

Dear Mrs. Kilby-Franklin:

Your letter of July 25, 1978, requesting selected data on enrollments, dropouts and graduates in Pennsylvania schools, has been referred to me for reply.

Gathering of enrollment data by race began in 1971. The enclosed Summaries of Enrollment (1971 through 1977) contain these data. Other limited enrollment data, back to 1965, can be gleaned from the outdated 1975 Projections publication.

Graduate data also are available in the two enclosed Projections publications.

As for dropout data, I am enclosing appropriate publications for school years 1975-76 and 1976-77. The man who handles dropout data, Mr. Ronald Simanovich, is currently on leave from the office. When he returns, I shall ask him to send you similar data for any previous years, if available.

Sincerely yours,

Paul C. Shatto, Jr.
Educational Statistics Associate

Enclosures

cc: Ronald J. Simanovich

	Description	Pages	Cost
Enrollment	State total, by grade, by race, 1969-1977	1	$ .25
	State total, by race, by sex, 1969-1977	1	.25
	State total, by grade, by race, 1960-1970	1	.25
	Male enrollment, by district, by grade, 1977	3	.75
	Female enrollment, by district, by grade, 1977	3	.75
	White enrollment, by district, by grade, 1977	3	.75
	Black enrollment, by district, by grade, 1977	3	.75
	Percent distributions of age-grade survey results, 1975	1	.25
Dropouts	State total, by grade, by age, by race, by sex 1972-1977	24	6.00
Graduates	State total, 1966-1976	1	.25
	State total, 1962-1972	1	.25
			$ 10.50

GOVERNOR'S OFFICE
OFFICE OF STATE PLANNING AND DEVELOPMENT
COMMONWEALTH OF PENNSYLVANIA
HARRISBURG, PA. 17120

July 13, 1978

Patricia K. Franklin
Project Consultant ISE
Institute for Services
to Education, Inc.
2001 S. Street, N.W.
Washington, D.C. 20009

Dear Ms. Franklin:

I am placing your name on the mailing list for the revised projections of population, which will be released shortly. The revisions will include population projections for the state and counties by age and sex.

You may want to contact John Senier in the Department of Education for projections of school enrollment. His number is (717) 787-6379.

Sincerely,

Nathalie G. Sato

NGS:gh

cc: OSPD Reading File

level operated as a major impediment to equal opportunity as defined by Title VI of the Civil Rights Act of 1964 and The Adams mandate.